



SRINIVAS UNIVERSITY

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III. Specific Observation of VEC -Report received from UGC- DEB on 23rd Feb, 2026

Programmes not recommended by VEC:

Submission:

B2- 1.1. Compliance Requirements

1. Act of the HEI for offering online programmes is not submitted.

(a) The HEI-Srinivas University Act (2013) permits the offering of online programmes under the following clauses:

Point 7(i), 7(vi), Point 8(ii), 8(xv),8 (xvii),8(xxi)- Attaching the copy of the Act having these provisions.

Annexure 1 (Proof attached)

(b) There are **three state private Universities** in Karnataka, which are already offering online mode programmes, duly approved by UGC-DEB.

Dayanand Sagar University (2012) and Adichunchanagiri University (2012) have provisions under their Act like Srinivas University Act (2013) only.

Attaching the copy of the Act of the referred Universities and its provisions mentioned under Point 7(i), 7(vi), Point 8(ii), 8(xv),8 (xvii),8(xxi)

On this precedence, Srinivas University will also be compliant with the same HEI act having the required provisions in it.

Annexure 2 (Proof attached)

(c) The objects of the University Act under point 7(vi) clearly permits the university to offer online mode which is in total alignment to the definition of Online mode as per the ODL OL Regulations 2020.Reference -Page 58, Part III- Sec 4 under definitions point (u)

Annexure 3. (Proof with page extract attached)

The above supports the compliance requirements

2. Copy of approval of statutory bodies for PPR & ELMs of 4-year UG programme(s) is not submitted.

The copy of the Statutory bodies' approval for the Programme Project Report and the ELM of 4-year UG programme for the online mode has been duly submitted.



Annexure 4 (Document attached)

This supports the compliance mandate

3. PPR is not as per UGC (Open and Distance Learning Programme and Online Programme) Regulations, 2020.

The suggestions given by the VEC panel members towards the PPR has been duly incorporated in each of the proposed programmes. The PPR document has been updated and passed again through the BOS and Academic council.

The contents of the updated PPR are as per the UGC (Open and Distance Learning Programme and Online Programme) Regulations, 2020.

Annexure 5 (PPR attached with Academic council MOM) Link to the document/drive

<https://drive.google.com/drive/u/1/folders/15yUosrSln09mfcuybfvT8il9BOwhoxST>

This supports the compliance mandate.

4. ELM is not as per UGC (Open and Distance Learning Programme and Online Programme) Regulations, 2020.

The ELM for the online programme has been prepared as per the UGC (Open and Distance Learning Programme and Online Programme) Regulations, 2020.

The ELM is enabled as per the 4 Quadrants of Audio-Visual content, E- learning modules, Web resources and discussion forums and Assessment questions.

The specifications given for the content preparation under each quadrant has been completely followed and facilitated for the course as per the academic credits.

The minimum content requirements as per the 50% duration of the programme has been completed and all the 4-quadrants content is made available from Sem 1 to 4 for UG programmes and from Sem1 to 2 for the PG programmes.

The VEC panel suggestions are also incorporated in the content as a measure of improvement.

Annexure 6: The content details as per the 4 quadrants is provided in the file /link as due submission along with the undertaking from the university for the same.

Annexure 6 (Content links as per 4 quadrants for all the programmes shared in the document/drive)

<https://drive.google.com/drive/u/1/folders/1euQb0F1z7YDsPF2G3zRqsYmfRHw JB R>

This supports the compliance mandate.


REGISTRAR
SRINIVAS UNIVERSITY
MANGALORE





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III. Specific Observation of VEC -Report received from UGC- DEB on 23rd Feb, 2026

1. Act of the HEI for offering online programme is not submitted.

Submission:

Srinivas University stands Compliant to this requirement, and the following reasons and documentary proofs are submitted in support of it.

(a) The HEI-Srinivas University Act (2013) permits the offering of online programmes under the following clauses:

Point 7(i), 7(vi), Point 8(ii), 8(xv), 8(xvii), 8(xxi) - Attaching the copy of the Act having these provisions.

Annexure 1 (Proof attached- Srinivas University Act (2013)-Relevant provisions highlighted)

(b) There are three state private Universities in Karnataka, which are already offering online mode programmes, duly approved by UGC-DEB.

Dayanand Sagar University (2012) and Adichunchanagiri University (2012) have provisions under their Act like Srinivas University Act (2013) only.

Attaching the copy of the Act of the referred Universities and its provisions mentioned under Point 7(i), 7(vi), Point 8(ii), 8(xv), 8 (xvii), 8(xxi)

On this **precedence**, Srinivas University will also be compliant with the same HEI act having the required provisions in it.

Annexure 2 (Proof attached- Adichunchanagiri University Act (2012) and Dayanand Sagar University Act (2012) - Same provisions as of Annexure- 1 is highlighted)

(c) The objects of the University Act under point 7(vi) clearly permits the university to offer online mode which is in total alignment to the definition of online mode as per the ODL OL Regulations 2020.Reference -Page 58, Part III- Sec 4 under definitions point (u)

Annexure 3. (Proof attached- Extract from Srinivas University Act (2013) and UGC ODL OL Regulations 2020 -Relevant points highlighted)


Registrar

REGISTRAR
SRINIVAS UNIVERSITY

MANGALORE





KARNATAKA ACT NO. 42 OF 2013
THE SRINIVAS UNIVERSITY ACT, 2013

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STATEMENT OF OBJECTS AND REASONS

Act No.42 of 2013.- A. Shama Rao Foundation (R), Mangalore has come forward to establish private University in the State. The establishment of a private university by a well-known organization would certainly help in spreading the quality education to the needy students. This also accelerates the enhancement of gross enrolment ratio in the higher education sector which presently stands at 11.5% only in Karnataka.

Keeping in view the above, it is considered necessary to provide for establishment of a private University in the name Srinivas University by the A. Shama Rao Foundation (R), Mangalore.

This private university focuses on teaching, training, research and development in the fields of Technical, Health, Management, life sciences and allied sectors and for the matters connected therewith or incidental thereto.

Hence, the Bill.

[L.C. Bill No.13 of 2013, File No. Samvyashae 26 Shasana 2013]

[Entry 25 of List III of the Seventh Schedule to the Constitution of India.]



KARNATAKA ACT NO. 42 OF 2013

(First Published in the Karnataka Gazette Extra-ordinary on the twenty fifth day of March, 2013)

THE SRINIVAS UNIVERSITY ACT, 2013

(Received the assent of the Governor on the Twenty Second day of March, 2013)

An Act to establish and incorporate in the State of Karnataka a University of unitary nature in private sector by the A. Shama Rao Foundation (R), Mangalore to promote and undertake the advancement of applied University education in General, Technical, Health, Management, Life Sciences and allied sectors and for the matters connected therewith or incidental thereto.

Whereas it is expedient to establish and incorporate in the State of Karnataka a University of unitary nature in private sector by the A. Shama Rao Foundation (R), Mangalore to promote and undertake the advancement of applied University Education in Technical, Health, Management, life sciences and allied sectors and for the matters connected therewith or incidental thereto for the purposes hereinafter appearing;

Be it enacted by the Karnataka State Legislature in the sixty fourth year of the Republic of India as follows:-

CHAPTER - I PRELIMINARY

1. Short title, extent and commencement:-(1) This Act may be called the Srinivas University Act, 2013.

(2) It extends to the whole of the State of Karnataka.

(3) It shall come into force on such ¹[date]¹ as the State Government may, by notification, in the official Gazette, appoint.

¹ The Act came into force on 23.02.2017 vide notification No. ED 370 URC 2016, Dated: 23.02.2017

2. Definitions:-In this Act, unless the context otherwise requires,-

(a) “Academic Council” means the Academic Council of the University as specified in section 25;

(b) “Agenda Matters” means all the matters and businesses to be designated in the Statutes each of which can be either included in the Agenda or be taken up for discussion and decision at a meeting of the Board of Governors or the Board of Management or any Committees, as the case may be, only subject to the prior written approval of the Chancellor, consenting to the passing of such matters and businesses at such a meeting;



(c) “Board of Governors” means the Board of Governors of the University as specified in Section 23;

(d) “Board of Management” means the Board of Management of the University as specified in Section 24;

(e) “Chancellor”, “Vice-Chancellor”, “Pro Vice-Chancellor” means respectively the Chancellor, Vice Chancellor and Pro Vice Chancellor of the University;

(f) “Campus” means a campus established, maintained by the University wherever situated;

(g) “Committees” means the committees formed under this Act or by the various functionaries of the University as the case may be and includes the Nomination Committee, the Finance Committee and such other committees;

(h) “Constituent College” means a college or institution established and maintained by the University;

(i) “Finance Committee” means the Finance Committee of the University as specified in Section 27;

(j) “Government” means the Government of Karnataka;

(k) “National Accreditation bodies” means a body established by the Central Government for laying down norms and conditions for ensuring academic standards of higher education, such as University Grants Commission, All India Council of Technical Education, National Council of Teacher Education, Medical and Dental Councils of India, Pharmaceutical Council of India, National Council of Assessment and Accreditation, Indian Council of Agriculture Research, Council of Scientific and Industrial Research etc. and includes the Government;

(l) “Prescribed” means prescribed by rules made by the Government under this Act;

(m) “Principal in relation to a Constituent College” means the head of the Constituent College and includes, where there is no Principal or in the absence of a Principal appointed, the Vice-Principal or any other person for the time being appointed to act as Principal;

(n) “Registrar” means the Registrar of the University;

(o) “Regional Centre” means a centre established or maintained by the University for the purpose of co-ordinating and supervising the work of Study Centres in any region and for performing such other functions as may be conferred on such centre by the Board of Management;



(p) “Sponsoring Authority” or “Sponsoring Body” in relation to this Act means Sponsoring Trust;

(q) “Sponsoring Trust” means A. Shama Rao Foundation (R), Mangalore, registered under the Indian Trust Act, 1982.

(r) “State” means State of Karnataka;

(s) “Statutes” and “Regulations” means respectively the Statutes and Regulations of the University made under this Act;

(t) “Study Centre” means a centre established and maintained by the University for the purpose of advising, counseling or for rendering any other assistance required by the students in the context of the education;

(u) “Teacher” means and includes a Professor, Associate Professor, Assistant Professor, Reader or Lecturer or such other person as may be appointed for imparting instruction or conducting or to guide research in the University or in a Constituent College and includes the Principal of Constituent College in conformity with the norms prescribed by the University Grants Commission;

(v) “University” means Srinivas University established and incorporated under this Act;

(w) “University Grants Commission” means the Commission established under section 4 of the University Grants Commission Act, 1956 (Central Act 3 of 1956);

(x) “Visitor” means the visitor of the University as specified in section 13.

CHAPTER - II

THE UNIVERSITY AND SPONSORING BODY

3. Proposal for the establishment of the University:- (1) Sponsoring Trust shall have the right to establish the University of unitary nature subject to and in accordance with the provisions of this Act.

(2) The proposal to establish a University shall be made to the State Government by Sponsoring Trust.

(3) The proposal shall contain the following particulars, namely:-

(i) the objects of the University along with the details of Sponsoring Trust;

(ii) the extent and status of the University and the availability of land;

(iii) the nature and type of programmes of study and research to be undertaken by the University during a period of five academic years immediately following the commencement date;

(iv) the nature of faculties, courses of study and research proposed to be started;



(v) the campus development such as buildings, equipment and structural amenities;

(vi) the phased outlays of capital expenditure for a period of five academic years immediately following the commencement date;

(vii) the item-wise recurring expenditure, sources of finance and estimated expenditure for each student;

(viii) the scheme for mobilizing resources and the cost of capital thereto and the manner of repayments to each source;

(ix) the scheme of generation of funds internally through the recovery of fee from students, revenues anticipated from consultancy and other activities relating to the objects of the University and other anticipated incomes;

(x) the details of expenditure on unit cost, the extent of concessions or rebates in fee, free ship and scholarship for students belonging to economically weaker sections and the fee structure indicating varying rate of fee, if any, that would be levied on students who are either non resident Indians or persons of Indian origin or sponsored by non resident Indians or persons of Indian origin and students of nationalities other than India;

(xi) the years of experience and expertise in the concerned discipline at the command of Sponsoring Trust; as well as the financial resources;

(xii) the system for selection of students to the courses of study at the University; and

(xiii) status of fulfillment of such other conditions as may be required by the State Government to be fulfilled before the establishment of the University.

(4) A Screening Committee shall be constituted by the State Government consisting of three members who are Ex-officio members of Karnataka State Higher Education Council to examine the proposal received from the Sponsoring Trust which has recommendations to the State Government for establishment of the University.

4. Establishment of the University:- (1) Where the State Government, after considering the recommendations of the screening Committee and holding such inquiry as it may deem necessary, is satisfied that-

(i) the Trust has ability to run an University with sufficient infrastructure.

(ii) owns a land to the extent specified below in accordance with its location namely:-

(a) twenty five acres of land if it is within limits of Bruhat Bangalore Mahanagara Palike;



- (b) forty acres of land if it is out side the limits of Bruhat Bangalore Mahanagara Palike but within Bangalore Metropolitan Region Development Authority area;
- (c) not less than sixty acres of land in the places other than the places specified in Clauses (a) and (b).

The land specified above shall consist of a single block and it shall be in the name of the concerned Trust / foundation / institution / university itself. Based on the furnished particulars required in sub-section (3) of section 3, the Government may direct the Trust to establish the permanent Statutory Endowment Fund as specified in section 47.

(2) After the establishment of the Permanent Statutory Endowment Fund, the State Government may, by notification, in the official Gazette, accord sanction for establishment of the University of unitary nature in the State by the name of "Srinivas University".

(3) The headquarters of the University shall be at Mangalore. The University shall have Campuses or Regional Centres, Study Centres anywhere in Karnataka and subject to the prior permission of the State Government and as per UGC norms.

(4) The First Chancellor, the First Vice-Chancellor, First members of the Board of Governors, First members of the Board of Management and the Academic Council and all persons who may hereafter become such officers or members, so long as they continue to hold such office or membership, shall constitute a body corporate and can sue and be sued in the name of the University.

(5) On sanction for the establishment of the University under sub-section (2), the land and other movable and immovable properties acquired, created, arranged or built by Sponsoring Trust for the purpose of the University shall vest in the University.

(6) In all suits and other legal proceedings by or against the University, the pleading shall be signed and verified by, and all processes in such suits and proceedings shall be issued to and be served on the Registrar.

(7) The land, building and other properties of the University shall not be used for any purpose other than incidental to the objects of the University.

5. Grants and Financial Assistance:- The University shall be self-financing and shall neither make a demand nor shall be entitled to any maintenance grant-in-aid or any other financial assistance from the State or any other body or corporation owned or controlled by the State:

Provided that the State may, provide financial support through grants or otherwise,-

(a) for research, development and other activities for which other State Government organizations are provided financial assistance; or



(b) for any specific research or programmes receiving support from the State Government and

(c) provided to or the benefit of the similar Universities in the State whether subject to a change in State Policy or otherwise;

Provided further that the university may receive any financial support from any other source.

6. Power to establish constituent College, additional campuses, Regional Centres or Study Centres:- The University may have Constituent Colleges, Regional Centres, additional campuses and Study Centres at such places in the State as it deems fit after the completion of five years after its establishment with prior approval of the State Government subject to norms of UGC and other National Accreditation bodies.

7. Objects of the University:-The University shall employ a broad range of strategies to achieve its vision and objectives,-

(i) to support, promote and undertake advancement of and innovation in University education leading up to and including post graduate, doctoral and post doctoral courses in the Technical, Health, Management, Life sciences and allied sectors and make provisions for research, advancement and dissemination of knowledge including consultancy in these fields;

(ii) to collaborate with any other universities, research institutions, non-profit organizations, industry associations, professional associations or other organizations, to conceptualize, design, develop and offer specific educational and research programmes, training programmes and exchange programmes for students, faculty members and others;

(iii) to undertake collaborative research and advocacy with any organizations with prior approval of the State Government;

(iv) to disseminate and advance knowledge by providing instructional and research facilities in such branches of learning as it may deem fit and in particular, to make special provisions for integrated courses in Technical, Health, Management, Life sciences and other such Higher Educational Programmes of the University and to make appropriate measures for promoting interdisciplinary studies and research;

(v) to develop human resources to meet the demands of high end technical and professional industries with research on future sustainable technologies catering to engineering solutions and support technology business and technology incubation;

(vi) to provide innovative system of University level education, flexible and open with regard to methods and places of learning, combination of courses eligibility for enrolment, age of entry, conduct of examinations and operation of programmes with a view to



promoting access and equity in higher learning besides encouraging excellence in new fields of knowledge and placing special emphasis on both academic as well as application oriented learning;

(vii) to develop resource centres to contribute to quality education with prior approval of State Government;

(viii) to establish Campuses, Regional centres, study centres and constituent Colleges at various locations in Karnataka and to contribute and develop an understanding of educational change in technical, professional, general education and social and human development with prior approval of Government;

(ix) to institute degrees, diplomas, certificates and other academic distinctions like award of credits on the basis of successful completion of academic work evaluated through multiple modern methods of assessment;

(x) to disseminate knowledge and develop a public debate on issues of education and allied development fields through seminars, conferences, executive education programmes, community development programmes, publications and training programmes and events;

(xi) to undertake programmes for development and training of faculty and researchers of the University in partnership with any other university of quality with prior approval of the State Government;

(xii) to undertake necessary or expedient action to pursue and promote the objectives of the University;

(xiii) to pursue any objectives as may be approved by the Government for the enhancement of education and other development sectors in India.

8. Powers of the University:-The University shall have the following powers, namely:-

(i) to establish and maintain such Campuses, Regional Centres and Study Centres in Karnataka as may be determined by the University from time to time in the manner laid down by the Statutes with prior approval of the Government and as per UGC norms;

(ii) to carry out all such other activities as may be necessary or feasible in furtherance of the object of the University;

(iii) to confer degrees or other academic distinctions in the manner and under conditions laid down in the Statutes;

(iv) to institute and award fellowships, scholarships and prizes, awards, medals etc., in accordance with the Statutes;



(v) to demand and receive such fees, bills, invoices and collect charges as may be fixed by the Statutes or rules, as the case may be;

(vi) to make provisions for extracurricular activities for students and employees;

(vii) to make appointments of the Faculty, officers and employees of the University or a Constituent College, Campuses, Regional Centres, Study Centres;

(viii) to receive voluntary donations and gifts of any kind not prohibited by any Law for the time being in force and to acquire, hold, manage, maintain and dispose of any movable or immovable property, including Trust and endowment properties for the purpose of the University or a Constituent College or a Campus, Regional Centre, Study Centre;

(ix) to institute and maintain hostels and to recognize places of residence for students of the University or a Constituent College;

(x) to supervise and control the residence and to regulate the discipline among the students and all categories of employees and to lay down the conditions of service of such employees, including the Code of Conduct for the students and employees;

(xi) to create academic, administrative and support staff and other necessary posts;

(xii) to co-operate and collaborate with other Universities in such a manner and for such purposes as the University may determine from time to time;

(xiii) to organize and conduct refresher courses, orientation courses workshops, seminars and other programmes for teachers, lesson writers, evaluators and other academic staff;

(xiv) to determine standards of admission to the University or a Constituent College, Regional Centres, Study Centres with the approval of Academic Council and to make admission of students of Karnataka not less than the extent provided in this Act;

(xv) to do all such other acts or things whether incidental to the powers aforesaid or not, as may be necessary to further the objects of the University;

(xvi) to institute Degrees, Diplomas, Certificates and other academic distinctions on the basis of examination or any other method of evaluation approved by the Government;

(xvii) to provide for the preparation of instructional materials, including films, cassettes, tapes, video cassettes, CD, VCD and other software and other relevant electronic and print media;

(xviii) to raise, collect, subscribe and borrow money with the approval of the Board of Governors whether on the security of the property of the University, for the purposes of the University;



(xix) to acquire, takeover, and run the management of any other educational institution with the prior approval of the State Government;

(xx) to acquire properties with the prior approval of the Board of Management;

(xxi) to undertake any other activities connected with or incidental to above objectives of the University.

9. University open to all classes, castes, creed, gender or nation:-The University admissions shall be open to all persons irrespective of caste, class, creed, gender or nation. All admissions shall be made on the basis of merit in the qualifying examinations:

Provided that forty percent of the admissions in all courses of the university shall be reserved for the students of Karnataka State and admissions shall be made through a Common Entrance Examination conducted by the State Government or its agency and seats shall be allotted as per the merit and reservation policy of the State Government from time to time.

Provided further that, where there are less than ten seats in any course like Post Graduate, they shall be reserved by clubbing such courses together and where there are less than three seats in any course they shall be reserved by rotation.

10. National Accreditation:- The University shall seek accreditation from respective statutory national accreditation bodies soon after its establishment. Further all the courses run by Private Universities shall be as per the regulations of the National Accreditation Bodies.

11. Powers of the Sponsoring Body:- The sponsoring body shall have the following powers with reference to the University, each of which may be exercised by the Sponsoring Body at its discretion, namely:-

- (i) to appoint or re-appoint or terminate the appointment of the Chancellor;
- (ii) to constitute the first Board of Governors of the University;
- (iii) to nominate the chairperson of the Board of Governors;
- (iv) to nominate three persons as members of the Board of Governors;
- (v) to nominate two persons as members of the Board of Management;
- (vi) to determine the source of funds to be contributed to the University Endowment Fund;
- (vii) to determine the application and spending of moneys by the University;
- (viii) to resolve any conflict at the meeting of the Board of Governors in the manner provided for in this Act.



CHAPTER – III

OFFICERS OF THE UNIVERSITY

12. Officers of the University:- The following shall be the officers of the University, namely:-

- (i) The Visitor;
- (ii) The Pro-visitor;
- (iii) The Chancellor;
- (iv) The Vice-Chancellor;
- (v) The Pro Vice-Chancellor;
- (vi) The Registrar;
- (vii) The Finance Officer; and
- (viii) Such other officers as may be declared by the Statutes to be officers of the University.

13. The Visitor:- (1) His Excellency the Governor of Karnataka shall be the Visitor of the University and the visitor may offer suggestions for the improvement of the functioning of the University.

(2) The Visitor shall preside at the convocation of the University for conferring degrees and diplomas.

(3) The Visitor shall have the following powers, namely:-

- (i) to call for any paper or information relating to the affairs of the University;
- (ii) on the basis of the information received by the Visitor and if he is satisfied that any order, proceedings or decision taken by any authority of the University is not in conformity with the Act, Regulations, or Rules, he may issue such directions as he may deem fit in the interest of the University and the directions so issued shall be complied with by all the concerned.

14. The Pro-Visitor:- (1) The Hon'ble Minister for Higher Education, Government of Karnataka shall be the pro-visitor of the University:-

(2) The pro-visitor shall, when the Visitor is absent, preside at the Convocation of the University for conferring degrees and diplomas.

15. The Chancellor:- (1) The Chancellor shall be appointed by the Sponsoring Body.

(2) The founder trustee of the Sponsoring Body shall be the first Chancellor, who shall hold for life or till he demits office.

(3) The subsequent Chancellor shall be either the then Trustee of the Sponsoring Body or such other person of eminence of national figure in the field of education, science,



culture or public life, when such an appointment is being considered, as may be decided by the Sponsoring Body.

(4) The subsequent Chancellor so appointed shall hold the office as determined by the Sponsoring Body.

(5) The Chancellor shall have such powers as may be conferred on him by this Act or the Statutes made there under, which shall include the following powers, namely:-

- (i) to function as the head of the University;
- (ii) to preside at all convocations of the University in absence of visitor and pro-visitor ;
- (iii) to function as a Chairperson of the Board of Governors of the University;
- (iv) to appoint or re-appoint or terminate the appointment of the Vice-Chancellor, in accordance with the provisions of this Act and the Statutes;
- (v) to nominate a person as a member of the Nomination Committee as referred to in sub-section (2) of section 16 of this Act;
- (vi) to preapprove the appointment of the Pro Vice-Chancellor, the Dean, the Registrar and the Finance Officer;
- (vii) to nominate two academicians as members on the Board of Governors;
- (viii) to appoint the first Pro Vice-Chancellor and the Finance Officer;
- (ix) to constitute the first Board of Management, the Finance Committee, the Research Council and the Academic Council;
- (x) to pre-approve the Agenda matters in the manner provided for in the Act;
- (xi) to resolve a conflict (excluding conflicts at a meeting of the Board of Governors) in the manner provided in this Act.

(6) In the event of there being a conflict inter-se between the functionary or body and any other functionary or body of the University, then the issue shall be referred to the Chancellor and the decision of the Chancellor in respect of such issue shall be final and binding on the University.

16. The Vice-Chancellor:- (1) The Vice-Chancellor shall be appointed by the Chancellor for a term of three years subject to other terms and conditions as may be laid down by the Statutes from among three persons recommended by the Nomination Committee constituted in accordance with the provisions of sub-section (2). After the term of three years, it is renewable for another term of three years.



Provided that a Vice-chancellor shall continue to hold the office even after expiry of his term till new Vice-chancellor joins. However, in any case this period shall not exceed one year.

(2) The Nomination Committee referred to in sub-section (1) shall consist of the following persons, namely:-

- (i) One person nominated by the Chancellor;
- (ii) Two nominees of the Board of Governors, one of whom shall be nominated as the Convener of the Committee by the Board of Governors.

(3) The Nomination Committee shall, on the basis of merit, recommend three persons suitable to hold the office of the Vice-Chancellor and forward the same to the Chancellor along with a concise statement showing the academic qualifications and other distinctions of each person.

(4) The Vice-Chancellor shall be the Principal Executive and Academic Officer of the University and shall exercise general supervision and control over the affairs of the University and give effect to the decisions of the authorities of the University.

Provided that, where any matter, other than the appointment of a Teacher is of urgent nature requiring immediate action and the same could not be immediately dealt with by any officer or the authority or other body of the University empowered by or under this Act to deal with it, the Vice-Chancellor may take such action as he may deem fit with the prior written approval of the Chancellor.

(5) The Vice-Chancellor shall exercise such other powers and perform such other duties as may be laid down by the Statutes or the Rules.

Provided that, where in the opinion of the Vice-chancellor, any decision of any authority of the university is outside the powers conferred by this Act or Statutes, Regulations or Rules made there under or is likely to be prejudicial to the interests of the university, he shall request the concerned authority to revise its decision within fifteen days from the date of its decision and in case the authority refuses to revise such decision wholly or partly or fails to take any decision within fifteen days, then such matter shall be referred to the Chancellor and his decision thereon shall be final.

(6) The services of the Vice-Chancellor can be terminated by the Chancellor with the approval of the Board of Governors after following the principles of natural justice and after providing an opportunity to present his case including for termination on disciplinary grounds.

(7) The Vice-Chancellor shall preside at the convocation of the University in the absence of the Visitor, Pro-Visitor and the Chancellor.



17. The Pro Vice-Chancellor:- The Vice-Chancellor shall appoint not exceeding three pro-vice Chancellors with the written approval of the Chancellor in such manner and they shall exercise such powers and perform such duties as may be laid down by the Statutes.

18. Deans of faculties:- Deans of faculties shall be appointed by the Vice-Chancellor with the written approval of the Chancellor in such manner and they shall exercise such powers and perform such duties as may be laid down by the Statutes.

19. The Registrar:- (1) The Registrar shall be appointed by the Chancellor in such manner and on such terms and conditions as may be laid down by the Statutes.

(2) All contracts as defined in statutes shall be entered into and signed by the Registrar on behalf of the University.

(3) The Registrar shall have the power to authenticate records on behalf of the University and shall exercise such other powers and perform such other duties as may be conferred by the statutes or may be required from time to time, by the Chancellor or the Vice-Chancellor.

(4) The Registrar shall be responsible for the due custody of the records and the common seal of the University and shall be bound to place before the Chancellor, the Vice-Chancellor or any other authority, all such information and documents as demanded.

20. The Finance Officer:- The Finance Officer shall be appointed by the Vice-Chancellor with the written approval of the Chancellor in such manner and he shall exercise such powers and perform such duties as may be laid down by the Statutes.

21. Other Officers:- The manner of appointment, terms and conditions of service and powers and duties of the other officers of the University shall be such as may be specified by Statutes.

CHAPTER – IV

AUTHORITIES OF THE UNIVERSITY

22. Authorities of the University:- The following shall be the authorities of the University, namely:-

- (i) The Board of Governors;
- (ii) The Board of Management;
- (iii) The Academic Council;
- (iv) The Research and Innovation Council;
- (v) The Finance Committee; and
- (vi) Such other authorities as may be declared by the Statutes to be the authorities of the University.



23. The Board of Governors and its powers:- (1) The Board of Governors shall consist of the following, namely:-

- (i) The Chancellor - Chairperson
- (ii) The Vice-Chancellor - Member
- (iii) The Principal Secretary /Secretary to the State Government in the Department of Higher Education or by his nominee not below the rank of Deputy Secretary
- (iv) The Principal Secretary /Secretary to the State Government in the Department of Medical Education or by his nominee not below the rank of Deputy Secretary
- (v) One expert from the field of management, finance or any other specialized, including administration to be nominated by the State Government.
- (vi) Two persons nominated by the Sponsoring Body of whom one shall be woman;
- (vii) The Pro Vice Chancellor who shall be non-voting member;
- (viii) One eminent educationist nominated by the University Grants Commission

(2) The Registrar shall be non-voting member Secretary of the Board of Governors.

(3) The tenure of office of the members of the Board of Governors, appointment of members, other than Government nominees, renewal and removal, etc., shall be such as may be laid down by the Statutes.

(4) All meetings of the Board of Governors shall always be chaired by the Chancellor and in his absence by any one of the nominees of the Chancellor. If Chancellor has not nominated any person to Chair such a meeting, members present in the meeting shall elect the Chairperson for that meeting only from among themselves by a simple majority.

(5) Quorum for all meetings of the Board of Governors shall be three members attending and voting at such meeting.

Provided that the presence of either the Chancellor or one nominee of the Sponsoring Body and in the absence of the Chancellor or one nominee of Sponsoring Body, the Vice Chancellor, shall always be necessary to form the quorum for any meeting of the Board of Governors.

(6) The Board of Governors shall be the Principal Governing Body of the University and shall have the following powers, namely:-

- (i) to appoint the Statutory Auditors of the University;
- (ii) to lay down policies to be pursued by the University;
- (iii) to review decisions of the other authorities of the University if they are not in conformity with the provisions of this Act, or the Statutes or the Rules;



- (iv) to approve the Budget and Annual Report of the University;
- (v) to make new or additional Statutes or amend or repeal the earlier Statutes and Rules;
- (vi) to take decision about voluntary winding up of the University;
- (vii) to approve proposals for submission to the Government;
- (viii) to nominate three members to the Fee Regulation Committee;
- (ix) to take such decisions and steps as are found desirable for effectively carrying out the objects of the University.

(7) The Board of Governor shall, meet at least three times a year.

(8) The Board of Governors shall meet at such time and place as may be specified by Statute.

24. The Board of Management :- (1) The Board of Management shall consist of the following, namely:-

- (i) The Vice Chancellor;
- (ii) The Pro-Vice Chancellors;
- (iii) The Registrar;
- (iv) Two nominees of the Sponsoring Body;
- (v) Two Deans of the faculties as nominated by the Vice Chancellor.

(2) The Vice Chancellor shall be the Chairperson of the Board of Management and the Registrar shall be the Secretary of the Board of Management.

(3) The Board of management shall be the executive body of the University. The powers and functions of the Board of Management shall be such as may be specified by the statutes.

(4) All meetings of the Boards of Management shall always be chaired by the Vice Chancellor and in the absence of the Vice Chancellor, by the nominee of the Sponsoring Body and where the Sponsoring Body has not nominated any nominees, then by any other member as elected by the members present in the meeting.

(5) In the event of a conflict of opinion at a meeting of the Board of Management, the issue shall be referred to the Chancellor and the decision of the Chancellor in respect of such issue shall be final and binding on the University.

25. The Academic Council:-(1) The Academic Council shall consist of the following, namely:-

- | | | | |
|-------|-------------------------|---|-------------|
| (i) | The Vice-Chancellor | - | Chairperson |
| (ii) | The Pro Vice Chancellor | - | Members |
| (iii) | The Registrar | - | Secretary |



(iv) Such other members as may be specified by the Statutes.

(2) The Academic Council shall be the principal academic body of the University and shall, subject to the provisions of this Act, the Statutes, Regulations and the Rules, co-ordinate and exercise general supervision over the academic policies of the University.

26. The Research and Innovation Council:- (1) Research and Innovation Council shall be the Principal Research and Innovation Committee of the University and shall provide the larger holistic vision of the kind of research to be undertaken by the University, including prioritization of the research areas. Research and Innovation Council shall, subject to the provisions of this Act, the Statutes, Regulations and the Rules, co-ordinate and exercise general supervision over the Innovation and Research policies of the University.

(2) The Research and Innovation Council shall consist of the following, namely:-

- | | | |
|--|---|--------------|
| (i) The Vice-Chancellor | - | Chairperson |
| (ii) The Pro Vice Chancellor | - | Member |
| (iii) The Dean of Research | - | Secretary |
| (iv) Head of the Department of Innovation | - | Member |
| (v) Deans of all Faculties | - | Members; and |
| (vi) Such other members as may be specified in the Statutes. | | |

27. The Finance Committee:-(1) The Finance Committee shall consist of the following, namely:-

- | | | |
|--|---|-------------|
| (i) The Chancellor or his Nominee- | - | Chairperson |
| (ii) The Vice-chancellor | - | Member |
| (iii) The Registrar | - | Member |
| (iv) The Finance Officer | - | Secretary |
| (v) One nominee of the Sponsoring Body | - | Member; and |
| (vi) Such other members as may be specified in the statutes. | | |

(2) The Finance Committee shall be the principal financial body of the University to take care of financial matters and shall, subject to the provisions of this Act, Rules and Statutes co-ordinate and exercise general supervision over the financial matters of the University.

28. Other Authorities:- The constitution, powers and functions of the other authorities of the University shall be such as may be specified by the statutes.

29. Disqualification for membership of an Authority or Body: A person shall be disqualified for being a member of any of the authorities of bodies of the University, if he;



- (a) is of unsound mind and stands so declared by a competent court;
- (b) is an undischarged insolvent;
- (c) has been convicted of any offence involving moral turpitude;
- (d) is conducting or engaging himself in private coaching classes; or
- (e) has been punished for indulging in or promoting unfair practice in the conduct of any examination, in any form, anywhere.
- (f) As and when the Sponsoring Body were to form an opinion in writing that a Member of any of the authorities or bodies is unfit to hold the post.

30. Proceedings not invalidated on account of vacancy:- No act or proceedings of any authority of the University shall be invalid merely by reason of the existence of any vacancy or defect in the constitution of the authority.

31. Provisions pertaining to Agenda Matters:- (1) No Agenda Matter shall be either included in the Agenda for or taken up for discussion and decided in, the meeting of the Board of Governors or the Board of Management or any Committees without obtaining the prior written approval of the Chancellor.

(2) In the event of breach, the Chancellor shall be entitled at all time to immediately take remedial action by reversing all decisions taken by any functionary or body of the University in breach of the provisions of the Act and consequent upon the pursuit of such a remedial action all such actions taken by the functionary or body of the University in breach of the provisions of the Act shall be deemed to be null and void, ab initio and consequently the status quo ante shall prevail in respect of the matter or decision in breach.

CHAPTER - V

STATUTES AND REGULATIONS

32. Statutes:- Subject to the provisions of this Act, the Statutes may provide for any matter relating to the University and staff, as given below, namely:-

- (i) the procedure for transaction of business of the Authorities of the University and the composition of bodies not specified in this Act;
- (ii) the operation of the permanent statutory endowment fund, University endowment fund, the general fund and the development fund;
- (iii) the terms and conditions of appointment of the Vice-Chancellor, the Registrar and the Finance Officer and their powers and functions;
- (iv) the mode of recruitment and the terms and conditions of service of the other officers, Teachers and employees of the University;
- (v) the procedure for resolving disputes between the University and its officers, Faculty members, employees and students;



- (vi) creation, abolition or restructuring of departments and faculties;
- (vii) the manner of co-operation with other Universities or institutions of higher learning;
- (viii) the procedure for conferment of honorary degrees;
- (ix) provisions regarding grant of free ships and scholarships;
- (x) policies in respect of seats in different courses of studies and the procedure of admission of students to such courses;
- (xi) policy relating to the fee chargeable from students for various courses of studies;
- (xii) institution of fellowships, scholarships, studentships, free ships, medals and prizes;
- (xiii) any other matters which may be decided by the Board of Governors or required to be provided by statutes under this Act.

33. Statutes how made:- (1) The first statutes framed by the Board of Management shall be submitted to the Board of Governors for its approval.

(2) The Board of Governors shall consider the First Statutes, submitted by the Board of Management and shall give its approval thereon with such modifications, if any, as it may deem necessary.

(3) The University shall publish the First Statutes, as approved by the Board of Governors in the University Notification, and thereafter, the First Statutes shall come into force from the date of its publication.

34. Power to amend the Statutes:- The Board of Governors may, make new or additional Statutes or amend or repeal the Statutes.

35. Regulations:- Subject to the provisions of this Act, the regulations may provide for all or any of the following matters, namely:-

- (i) admission of students to the University and their enrolment and continuance as such;
- (ii) the courses of study to be laid down for all degrees and other academic distinctions of the University;
- (iii) the award of degrees and other academic distinctions;
- (iv) the conditions of the award of fellowships, scholarships, studentships, medals and prizes;
- (v) the conduct of examinations and the conditions and mode of appointment and duties of examining bodies, examiners invigilators, tabulators and moderators;
- (vi) the fee to be charged for admission to the examinations, degrees and other academic distinctions of the University;



- (vii) the conditions of residence of the students at the University or a Constituent College;
- (viii) maintenance of discipline among the students of the University or a Constituent College;
- (ix) all other matters as may be provided in the Statutes under the Act.

36. Regulations how made:- The Regulations shall be made by the Academic Council and approved by Board of Management.

37. Power to amend Regulations:- The Academic Council may, with the approval of the Board of Management, make new or additional regulations or amend or repeal the regulations.

38. Fee Regulation Committee:- (1) The fee of the university seats reserved for Karnataka Students under section 9 shall be regulated by the Fee Regulation Committee Constituted by the Government, which shall be headed by a retired Supreme Court or High Court Judge and consists of Chancellor, Vice-Chancellor of the University, Principal Secretary or Secretary to Government incharge of Higher Education or by his nominee not below the rank of Deputy Secretary, Principal Secretary or Secretary to Government incharge of Medical Education or by his nominee not below the rank of Deputy Secretary, two Academicians nominated by the Board of Governors of whom one shall be woman. A Chartered Accountant of repute shall be co-opted for this purpose in the Committee.

(2) The Committee shall look after the compliance of the university in its admissions of collection of fee.

CHAPTER – VI MISCELLANEOUS

39. Conditions of service of employees:- (1) Every employee shall be appointed under a written contract subject to such terms and conditions as may be specified by statutes and regulations or prescribed if any by rules which shall be kept in the University and a copy of which shall be furnished to the employee concerned.

(2) Disciplinary action against the employees shall be governed by the procedure specified in the Statutes.

(3) Any dispute arising out of the contract between the University and an employee shall, be resolved in the manner provided for in the written contract and in accordance with the Statutes.

40. Right to appeal:- In case of disciplinary actions by the University against its employee or student, the aggrieved employee or students shall have a right to appeal as specified by the statutes.



41. Provident or pension fund:- The University shall constitute for the benefit of its employees such provident or pension fund and provide such insurance scheme as it may deem fit in such manner and subject to such conditions as may be specified by the statutes and the laws in force.

42. Disputes as to constitution of University authorities and bodies:- If any question arises as to whether any person has been duly elected or appointed as, or is entitled to be a member of any authority or other body of the University, the matter shall be referred to the Chancellor whose decision thereon shall be final.

43. Constitution of Committees:- Any authority of the University mentioned in section 22, shall be empowered to constitute a committee of such authority, consisting of such members of such authority and having such powers as the authority may deem fit.

44. Filling of casual vacancies:- Any casual vacancy among the members, other than ex-officio members of any Authority or body of the University shall be filled in the same manner in which the member whose vacancy is to be filled up, was chosen, and the person filling the vacancy shall be a member of such authority or body for the residual term for which the person in whose place he would have been a member.

45. Protection of action taken in good faith:- No suit or other legal proceedings shall lie against any officer or other employee of the University for anything, which is done in good faith or intended to be done in pursuance of the provisions of this Act, the Statutes or the Rules.

46. Transitional provisions:- Notwithstanding anything contained in any other provisions of this Act and the Statutes,-

(i) the first Vice-Chancellor and Pro-Vice-Chancellor, if any shall be appointed by the Chancellor;

(ii) the first Registrar and the first Finance Officer shall be appointed by the Chancellor; and

(iii) the first Board of Management, the first Finance Committee, Planning Board, the first Innovation and Research Council and the first Academic Council shall be constituted by the Chancellor.

47. Permanent Statutory Endowment Fund:- (1) The University shall establish a Permanent Statutory Endowment Fund of at least rupees twenty five crores out of which at least fifteen crores shall be in cash and remaining in the form of Bank guarantee which may be increased suo moto but shall not be decreased.



Provided that in case of a University outside Bangalore or Bangalore Rural District at least ten crores must be in form of cash and the remaining five crores shall be in form of Bank Guarantee.

(2) The University shall have power to invest the permanent Statutory Endowment Fund in such manner as may be prescribed by the statutes.

(3) The University may transfer any amount from the General Fund or the Development Fund to the permanent Statutory Endowment Fund. Excepting in the event of dissolution of the University, in no other circumstances can any monies be transferred from permanent Statutory Endowment Fund for other purposes.

(4) Seventy five percent of the incomes received from permanent Statutory Endowment Fund shall be used for the purpose of development or general work of the University. The remaining twenty five percent shall be reinvested in the permanent Statutory Endowment Fund.

48. University Endowment Fund:- (1) The University shall establish a University Endowment Fund having such funds as may be determined by the Sponsoring Body which can include donations and other fund received from time to time.

(2) The University shall have the power to invest the University Endowment Fund in a manner as may be specified by the Statutes.

(3) The University Endowment Fund is a self-imposed fund that the University desires to maintain voluntarily and invest it responsibly to protect itself from financial challenges that may arise on account of pursuing social objectives and/or unforeseen circumstance.

(4) The University may transfer any amount from the General Fund or the development fund to the University Endowment Fund. Excepting in the event of dissolution of the University, in no other circumstances can any monies be transferred from the University Endowment Fund for other purposes.

(5) Eighty percent of the incomes received from the University Endowment Fund shall be used for the purposes of development or general work of the University. The remaining twenty percent shall be reinvested into the University Endowment Fund.

49. General Fund:-(1) The University shall establish a General Fund to which the following amount shall be credited, namely:-

- (i) all fees which may be charged by the University;
- (ii) all sums received from any other source not prohibited by any law for the time being in force;
- (iii) all contributions made by the University;



(iv) all contributions/donations made in this behalf by any other person or body which are not prohibited by any law for the time being in force.

(2) The funds credited to the General Fund shall be applied to meet all the recurring expenditure of the University.

50. Development fund:- (1) The University shall establish a Development Fund to which the following funds shall be credited, namely:-

- (i) development fees which may be charged from students;
- (ii) all sums received from any other source for the purposes of the development of the University;
- (iii) all contributions made to the University;
- (iv) all contributions/donations made in this behalf by any other person or body which are not prohibited by any law for the time being in force; and
- (v) all incomes received from the Permanent Statutory Endowment Fund.

(2) The funds credited to the Development Fund from time to time shall be utilized for the development of the University.

51. Maintenance of funds:- The funds established under sections 47, 48, 49 and 50 shall, subject to general supervision and control of the Board of Governors, be regulated and maintained in such manner as may be prescribed.

52. Annual Report:- (1) The annual report of the University shall be prepared under the direction of the Board of Management and shall be submitted to the Board of Governors for its approval.

(2) The Board of Governors shall consider the annual report in its meeting and may approve the same with or without modification.

(3) A copy of the annual report duly approved by the Board of Governors shall be sent to the Visitor and the State Government before 31st December following close of the financial year in 31st March of each year.

53. Account and audit:- (1) The annual accounts and balance sheet of the University shall be prepared under the direction of the Board of Management and all funds accruing to or received by the University from all source and all amount disbursed or paid shall be entered in the account maintained by the University.

(2) The annual accounts of the University shall be audited by an auditor, who is a member of the Institute of Chartered Accountants of India, every year.

(3) A copy of the annual accounts and the balance sheet together with the audit report shall be submitted to the Board of Governors before 30th November following close of the financial year in 31 March of each year.



(4) The annual accounts, the balance sheet and the audit report shall be considered by the Board of Governors at its meeting and the Board of Governors, shall forward the same to the visitor and the Government along with its observation thereon or before 31st December of each year.

(5) In the event of any material alteration in the Report of the Auditors, the State Government may issue directions to the University, and to rectify the alterations and such directions shall be binding on the University.

54. Mode of proof of University record:- A copy of any receipt, application, notice, order, proceeding or resolution of any authority or committee of the University or other documents in possession of the University or any entry in any register duly maintained by the University, if certified by the Registrar, shall be received as prima facie evidence of such receipt, application, notice, order, proceeding, resolution or document or the existence of entry in the register and shall be admitted as evidence of the matters and transaction therein recorded where the original thereof would, if produced, have been admissible in evidence.

55. Power of State Government to issue directions:- The State Government may give such directions to the University as in its opinion are necessary or expedient for carrying out the purposes of this Act or to give effect to any of the provisions contained therein or of any rules or orders made thereunder and the Board of Governor or the Board of management, as the case may be, of the University shall comply with every such direction.

56. Penalties:- (1) Whoever contravenes the provisions of this Act or the rules made thereunder or any examination matters or in matters relating to award of degrees or in giving marks cards shall on conviction be punishable with fine of rupees fifty thousand which may extend to ten lakhs rupees or with an imprisonment for a term of six months which may extend to two years or with both.

Provided that, where the University is also involved in committing the offence the permission letter granted under this Act to commence the University shall be withdrawn.

(2) A penalty under this section may be imposed without prejudice to the penalty specified in any other Act.

57. Power to Enter and Inspect - Any officer not below the rank of Group 'A' officer authorized by the State Government in this behalf, shall, subject to such conditions as may be specified therein under the Karnataka Educational Institutions (Prohibition of Capitation Fee) Act, 1984 (Karnataka Act 37 of 1984) shall be deemed to be the officer authorized to



exercise the same powers and discharge the same functions as provided under section 9 of that Act for the purposes of this Act.

58. Power to give direction for dissolution of the University:- (1) If the University proposes dissolution in accordance with the law governing its constitution or incorporation, it shall give at least six months prior notice in writing to the Government.

(2) The Karnataka State Higher Education Council shall conduct Inspection of University once in two years regarding;-

- (i) Standard of Instructions for grant of degree;
- (ii) Quality of Education;
- (iii) Avoidance of commercialisation of Higher Education;
- (iv) contravention of the provisions of the Act if any;

-and send report to the Government.

(3) On identification of mismanagement, maladministration and indiscipline, the Government shall issue directions to the management of the University to set right the administration. If the direction is not followed within such time as may be prescribed, the right to take decision for winding up of the University or any course thereof shall vest with the Government.

(4) The manner of winding up of the University or any course thereof shall be such as may be prescribed by the Government in this behalf.

Provided that no such action shall be initiated without affording a reasonable opportunity to show cause to the University

(5) On receipt of the notice referred to in sub-section (1), the Government shall, in consultation with the relevant Regulatory Authority make such arrangements for the administration of the University for the rest of the period of from the proposed date of dissolution of the University or winding up of the course and until the last batch of students in regular courses of studies of the University complete their courses of studies in such manner as may be specified by the Statues.

59. Expenditure of the University during dissolution:-(1) The expenditure of administration of the University during taking over period of its management under sub-section (5) of section 58 shall be met out of the Permanent Statutory Endowment Fund, the General Fund or the Development Fund in such manner as may be prescribed.

(2) If the fund referred to in section 47, 48, 49 and 50 are not sufficient to meet the expenditure of the University during the taking over period of its management, such expenditure may be met by disposing of the properties or asset of the University, by the Government.



(3) Where the dissolution of the University is due to mismanagement or maladministration, the Government is at liberty to identify the persons responsible for such mismanagement or maladministration and to impose penalty as it deems fit.

60. Removal of difficulties:- (1) If any difficulty arises in giving effect to the provisions of this Act, the State Government may, by a notification or by order, make such provisions, which are not inconsistent with the provisions of this Act, as appear to it to be necessary or expedient, for removing the difficulty:

Provided that, no notification or order under this section shall be made after the expiry of a period of five years from the date of commencement of this Act.

(2) Every Order made under sub-section (1), shall, as soon as may be after it is made, be laid before the State Legislature.

61. Power to make rules by the State Government:- (1) The State Government may make rules, by notification, to carryout the purposes of this Act.

(2) Every rule made under this Act shall be laid as soon as may be after it is made before each House of the State Legislature while it is in session for a total period of thirty days which may be comprised in one session or in two or more successive sessions, and if, before the expiry of the session immediately following the session or the successive sessions aforesaid, both Houses agree in making any modification in the rule or both Houses agree that the rule should not be made, the rule shall thereafter have effect only in such modified form or be of no effect, as the case may be, so however, that any such modification or annulment shall be without prejudice to the validity of anything previously done under that rule.

The above translation of ಶ್ರೀನಿವಾಸ ವಿಶ್ವವಿದ್ಯಾಲಯ ಅಧಿನಿಯಮ, 2013 (2013ರ ಕರ್ನಾಟಕ ಅಧಿನಿಯಮ ಸಂಖ್ಯೆ: 42) be published in the Official Gazette under clause (3) of Article 348 of the Constitution of India.

H.R. BHARDWAJ

GOVERNOR OF KARNATAKA

By Order and in the name of the Governor of
Karnataka

K. DWARAKANATH BABU

Secretary to Government (I/c),
Department of Parliamentary
Affairs and Legislation



ಸಂಖ್ಯೆ: ಇಡಿ 370 ಯುಆರ್‌ಸಿ 2016

ಕರ್ನಾಟಕ ಸರ್ಕಾರದ ಸಚಿವಾಲಯ,
ಬಹುಮಹಡಿ ಕಟ್ಟಡ,
ಬೆಂಗಳೂರು, ದಿನಾಂಕ:23ನೇ ಫೆಬ್ರವರಿ 2017

ಅಧಿಸೂಚನೆ

ಶ್ರೀನಿವಾಸ ವಿಶ್ವವಿದ್ಯಾಲಯ ಅಧಿನಿಯಮ, 2013 (2013ರ ಕರ್ನಾಟಕ ಅಧಿನಿಯಮ ಸಂಖ್ಯೆ: 42) ರ 1ನೇ ಪ್ರಕರಣದ (3)ನೇ ಉಪ-ಪ್ರಕರಣದಡಿ ಪ್ರದತ್ತವಾದ ಅಧಿಕಾರವನ್ನು ಚಲಾಯಿಸಿ ಕರ್ನಾಟಕ ಸರ್ಕಾರವು ಈ ಮೂಲಕ ಸದರಿ ಅಧಿನಿಯಮವು ದಿನಾಂಕ:23ನೇ ಫೆಬ್ರವರಿ 2017 ರಿಂದ ಜಾರಿಗೆ ಬರತಕ್ಕದ್ದೆಂದು ಗೊತ್ತುಪಡಿಸುತ್ತದೆ.

ಕರ್ನಾಟಕ ರಾಜ್ಯಪಾಲರ ಆದೇಶಾನುಸಾರ
ಮತ್ತು ಅವರ ಹೆಸರಿನಲ್ಲಿ

(ಎಂ.ಎ. ಅಹಮದ್ ಜಾನ್)

ಸರ್ಕಾರದ ಅಧೀನ ಕಾರ್ಯದರ್ಶಿ,
ಉನ್ನತ ಶಿಕ್ಷಣ ಇಲಾಖೆ (ವಿಶ್ವವಿದ್ಯಾಲಯಗಳು-2)





ADICHUNCHANAGIRI UNIVERSITY ACT, 2012

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STATEMENT OF OBJECTS AND REASONS

Act 18 of 2013.- Sri Adichunchanagiri Shikshana Trust, Mandya District have come forward to establish private University in the State. The establishment of a private university by a well-known organization would certainly help in spreading the quality education to the needy students. This also accelerates the enhancement of gross enrolment ratio in the higher education sector, which presently stands at 11.5 percent in Karnataka.

Keeping in view the above, it is considered necessary to provide for establishment of Adichunchanagiri University.

This private university focuses on teaching, training, research and development in the fields of Engineering and Technology, Health Sciences, Agricultural Sciences and Technology, Management and Technology, Natural Sciences, Humanities and Social Sciences and allied sectors and other disciplines and allied sectors and for the matters connected therewith or incidental thereto.

Hence, the Bill.

[L.A. Bill No. 48 of 2012, File No. Samvyashae 79 Shasana 2012]

[Entry 25 of List III of the Seventh Schedule to the Constitution of India.]

II

Act 13 of 2019.- It is considered necessary to amend the Adichunchanagiri University Act, 2012 (Karnataka Act 18 of 2013) to,-

- (i) increase the number of nominated persons by the Sponsoring Body from two to three;
- (ii) include two academicians nominated by the Chancellor as members to the Board of Governors.

Hence the Bill.

[L.A. Bill No.07 of 2019, File No. Samvyashae 08 Shasana 2019]

[entry 25 of List III of the Seventh Schedule to the Constitution of India.]



KARNATAKA ACT NO. 18 OF 2013

(First Published in the Karnataka Gazette Extra-ordinary on the Eighth day of February of February, 2013)

ADICHUNCHANAGIRI UNIVERSITY ACT, 2012

(Received the assent of the Governor on the Fifth day of February, 2013)

(As amended by Act 13 of 2019)

An Act to establish and incorporate in the State of Karnataka a University of unitary nature in Private Sector to promote and undertake the advancement of University Education in Engineering and Technology, Health Sciences, Agricultural Sciences and Technology, Management and Technology, Natural Sciences, Humanities and Social Sciences and allied sectors and for the matters connected therewith or incidental thereto.

Whereas it is expedient to establish and incorporate in the State of Karnataka a University of unitary nature in private sector to promote and undertake the advancement of University Education in Engineering and Technology, Health Sciences, Agricultural Sciences and Technology, Management and Technology, Natural Sciences, Humanities and Social Sciences and allied sectors and for the matters connected therewith or incidental thereto for the purposes hereinafter appearing;

Be it enacted by the Karnataka State Legislature in the sixty third year of the Republic of India as follows:-

CHAPTER – I

PRELIMINARY

1. Short title, extent and commencement.- (1) This Act may be called Adichunchanagiri University Act, 2012.

(2) It extends to the whole of the State of Karnataka

(3) It shall come into force on such date as the State Government may, by notification in the official Gazette, appoint.

2. Definitions.- In this Act, unless the context otherwise requires,-

(a) "Academic Council" means the Academic Council of the University as specified in section 25;

(b) "Agenda Matters" means all the matters and business to be designated in the Statutes each of which can be either included in the Agenda or be taken up for discussion and decision at a meeting of the Board of Governors or the Board of Management or any Committees, as the case may be, only subject



to the prior written approval of the Chancellor, consenting to the passing of such matters and business at such a meeting;

- (c) "Board of Governors" means the Board of Governors of the University as constituted under section 23;
- (d) "Board of Management" means the Board of Management of the University as constituted under section 24;
- (e) "Chancellor", "Vice-Chancellor", "Pro Vice-Chancellor" means respectively the Chancellor, Vice Chancellor and Pro Vice Chancellor of the University;
- (f) "Campus" means a campus established, maintained by the University;
- (g) "Committees" means the committees formed under this Act or by the various functionaries of the University as the case may be and includes the Nomination Committee, the Finance Committee, and such other committees;
- (h) "Constituent College" means a college or institution established and maintained by the University;
- (i) "Finance Committee" means the Finance Committee of the University as constituted under section 27;
- (j) "Government" means the Government of Karnataka;
- (k) "National Accreditation Bodies" means a body established by the Central Government for laying down norms and conditions for ensuring academic standards of higher education, such as University Grants Commission, All India Council of Technical Education, Medical Council of India, Pharmaceutical Council of India, Indian Council of Agriculture Research, National Assessment and Accreditation Council, National Council of Teacher Education, Distance Education Council, Council of Scientific and Industrial Research, and includes the Government;
- (l) "Prescribed" means prescribed by rules made by the Government under this Act.
- (m) "Principal in relation to a Constituent College" means the head of the Constituent College and includes, where there is no Principal or in the absence of a Principal appointed, the Vice-Principal or any other person for the time being appointed to act as Principal;
- (n) "Registrar" means the Registrar of the University;
- (o) "Regional Centre" means a centre established or maintained by the University for the purpose of coordinating and supervising the work of Study Centres in any region and for performing such other functions as may be conferred on such centre by the Board of Management;



- (p) "Trust" means Adichunchanagiri Shikshana Trust, which is a registered Trust and is the sponsoring body.
- (q) "Sponsoring Authority" or "sponsoring body" in relation to this Act means the Trust;
- (r) "State" means State of Karnataka;
- (s) "Statutes" and "Regulations" means respectively, the Statutes and Regulations of the university made under this Act;
- (t) "Study centre" means a centre established and maintained by the university for the purpose of advising, counseling or for rendering any other assistance required by the students;
- (u) "Teacher" means and includes a Professor, Associate Professor, Assistant Professor, or such other person as may be appointed for imparting instruction or conducting or to guide research in the University or in a Constituent College and includes the Principal of Constituent College in conformity with the norms specified by the 'University Grants Commission';
- (v) "University Grants Commission" means the Commission established under section 4 of the University Grants Commission Act, 1956 (Central Act 3 of 1956);
- (w) "University" means Adichunchanagiri University, established and incorporated under this Act;
- (x) "Visitor" means the visitor of the University as specified in section 13.

CHAPTER - II

THE UNIVERSITY AND SPONSORING BODY

3. Proposal for the establishment of the University.- (1) The Trust shall have the right to establish the University of unitary nature subject to and in accordance with the provisions of this Act.

(2) The proposal to establish a University shall be made to the State Government by the Trust.

(3) The proposal shall consist of the following particulars, namely:-

- (i) the objects of the University along with the details of the Trust;
- (ii) the extent and status of the University and the availability of land;
- (iii) the nature and type of programmes of study and research to be undertaken by the University during a period of five academic years immediately following the commencement date;
- (iv) the nature of faculties, courses of study and research proposed to be started;



- (v) the campus development such as buildings, equipment and structural amenities;
- (vi) the phased outlays of capital expenditure for a period of five academic years immediately following the commencement date;
- (vii) the item-wise recurring expenditure, sources of finance and estimated expenditure for each student;
- (viii) the scheme for mobilizing resources and the cost of capital thereto and the manner of repayments to each source;
- (ix) the scheme of generation of funds internally through the recovery of fee from students, revenues anticipated from consultancy and other activities relating to the objects of the University and other anticipated incomes;
- (x) the details of expenditure on unit cost, the extent of concessions or rebates in fee, freeship and scholarship for students belonging to economically weaker sections and the fee structure indicating varying rate of fee, if any, that would be levied on students who are either non resident Indians or persons of Indian origin or sponsored by non resident Indians or persons of Indian origin and students of nationalities other than India;
- (xi) the years of experience and expertise in the concerned discipline at the command of the Trust as well as the financial resources;
- (xii) the system for selection of students to the courses of study at the University; and
- (xiii) status of fulfillment of such other conditions as may be required by the State Government to be fulfilled before the establishment of the University.

(4) A Screening Committee shall be constituted by the State Government consisting of three member who are Ex-officio members of Karnataka State Higher Education Council to examine the proposals received, which shall make recommendations to the State Government.

4. Establishment of the University.- (1) Where the State Government, after considering the recommendations of the screening Committee and holding such inquiry as it may deem necessary, is satisfied that,-

- (i) the Trust has ability to run an University with sufficient infrastructure.
- (ii) owns a land to the extent specified below in accordance with its location, namely:-
 - (a) twenty five acres of land if it is within limits of Bruhat Bangalore Mahanagara Palike;



- (b) forty acres of land if it is out side the limits of Bruhat Bangalore Mahanagara Palike but within Bangalore Metropolitan Region Development Authority area;
- (c) not less than sixty acres of land in the places other than the places specified in clauses (a) and (b).

The land specified above shall consist of a single block and it shall be in the name of concerned Trust/foundation/institution/ university itself. Based on the furnished particulars required in sub-section (3) of section 3, the Government may direct the Trust to establish the permanent Statutory Endowment Fund as specified in section 47.

(2) After the establishment of the Permanent Statutory Endowment Fund, the Government may, by notification, in the official Gazette, accord sanction for establishment of the University of unitary nature in the State by the name of "Adichunchanagiri University".

(3) The headquarters of the University shall be at Mandya District. The University shall have Campuses or Regional Centres, Study Centres anywhere in Karnataka and subject to the prior permission of the State Government and as per UGC norms.

(4) The First Chancellor, the First Vice-Chancellor, First members of the Board of Governors, First members of the Board of Management and the Academic Council and all persons who may hereafter become such officers or members, so long as they continue to hold such office or membership, shall constitute a body corporate and can sue and be sued in the name of the-University.

(5) On sanction for the establishment of the University under sub-section (2), the land and other movable and immovable properties acquired, created, arranged or built by the Trust for the purpose of the University shall vest in the University.

(6) In all suits and other legal proceedings by or against the University, the pleading shall be signed and verified by and all processes in such suits and proceedings shall be issued to and be served on the Registrar.

(7) The land, building and other properties of the University shall not be used for any purpose other than incidental to the objects of the University.

5. Grants and Financial Assistance.- The University shall be self-financing and shall neither make a demand nor shall be entitled to any maintenance, grant-in-aid or any other financial assistance from the State or any other body or corporation owned or controlled by the State:

Provided that the State may, provide financial support through grants or otherwise:-

- (a) for research, development and other activities for which other State Government organizations are provided financial assistance; or
- (b) for any specific research or programmes receiving support from the



Government; and

- (c) for the benefit of similar universities in the State whether subject to a change in State policy or otherwise:

Provided further that the university may receive any financial support from any other source.

6. Power to establish constituent College, additional campuses, Regional Centres or Study Centres.- The University may have Constituent Colleges, Regional Centres, additional campuses and Study Centres at such places in the State as it deems fit after the completion of five years after its establishment with prior approval of the State Government subject to norms of UGC and other National Accreditation bodies.

7. Objects of the University.- The University shall employ a broad range of strategies to achieve its vision and objectives,-

(i) to expand the horizon of world knowledge, provide instruction, teaching and learning including writing and reading, training, research and development at various levels such as Elementary Education, Secondary Education, Higher Education, in the subject disciplines such as:

- (a) Engineering and Technology including Civil, Architecture, Mechanical, Automobile, Electrical, Electronics and Communication, Computer Science and Engineering, Information Technology, Design and Printing Technology including 3-D, Environmental Engineering, Bio-Technology, Space Technology, Nano-materials and Technology and any other emerging areas including interdisciplinary etc.
- (b) Health Sciences including Medical, Dental, Ayurveda, Homeopathy, Naturopathy, Pharma, Nursing and any other emerging areas including interdisciplinary etc.
- (c) Agricultural Sciences and Technology School or College or Center.
- (d) Management and Technology including Business Management, Tourism Management, Hotel Management, Hospitality Management, Hospital Management, Disaster Management, Risk Management and any other emerging areas of study including inter-disciplinary areas etc.
- (e) Natural Sciences including Physics, Electronics, Mathematics, Computer Science, Chemical and Environmental Sciences, Biological Sciences, Earth Sciences, Space Sciences, Nano Science and Nano-Materials and any other emerging area of study including interdisciplinary etc.
- (f) Humanities and Social Sciences including History, Kannada, Economics, Political Science, Journalism, Tourism, Law, Philosophy, Puranas and



Pravachanas, Music, Art, Fashion Design including 3-D Design, Animation, Culture, Social Works, Sanskrit, English, other Indian and Foreign Languages and any other emerging areas of study including interdisciplinary areas etc.

(g) Any other emerging areas or faculty or field of study across the globe.

(ii) to design and deliver high quality training, capacity building and development systems for teachers, teacher educators, teachers in higher and professional education, Leadership training including political leaders, administrators and development professionals working in education and other systems.

(iii) to institute degrees, diplomas including PG diplomas, dual degree programmes, integrated courses, certificates and other academic distinctions like awards, award of credits on the basis of , -

(a) successful completion of academic work evaluated through multiple methods including modern methods of assessment; and

(b) outstanding contributions like writing original book or books, research publication, services in the areas of cultural and spiritual by eminent persons in different areas of learning;

(iv) to collaborate with any other universities, research institutions, non-profit organization, industry associations, professional associations or other organizations to conceptualize, design, develop and offer specific educational and research programmes, training programmes and exchange programmes for students, faculty members and others;

(v) to disseminate knowledge and develop a public debate on issues of education and allied development fields through series of lectures, seminars, conferences, executive education programmes, community development programmes, publications and training programmes and events;

(vi) to initiate and undertake programs for the development and training of faculty, researches, and support staff of the University in partnership, collaboration, co-operation, joint venture, strategic or any other form of mutually beneficial relationship with any other institution or institutions of similar vision, mission, strategic architecture and objectives;

(vii) to undertake collaborative research and advocacy with any organizations;

(viii) to undertake necessary or expedient action to pursue and promote the objectives of the University;

(ix) to undertake any objectives as may be approved by the Government for the enhancement of the education and other development sectors.

8. Powers of the University.- The University shall have the following powers, namely:-



- (i) to establish and maintain Campuses, Regional Centres and Study Centres in Karnataka as may be determined by the University from time to time in the manner laid down by the Statutes with prior approval of the Government and as per UGC norms.
- (ii) to carry out all such other activities as may be necessary or feasible in furtherance of the object of the University;
- (iii) to confer degrees or other academic distinctions in the manner and under conditions laid down in the Statutes;
- (iv) to institute and award fellowships, scholarships and prizes, awards medals etc., in accordance with the Statutes;
- (v) to demand and receive such fees, bills, invoices and collect charges as may be fixed by the Statutes or rules, as the case may be;
- (vi) to make provisions for extra curricular activities for students and employees;
- (vii) to make appointments of the Faculty, officers and employees of the University or a Constituent College, Campuses, Regional Centres, Study Centres;
- (viii) to receive voluntary donations and gifts of any kind not prohibited by any Law for the timebeing inforce and to acquire, hold, manage, maintain and dispose of any movable or immovable property, including Trust and endowment properties for the purpose of the University or a Constituent College or a Campus, Regional Centre, Study Centre;
- (ix) to institute and maintain hostels and to recognize, places of residence for students of the University or a Constituent College;
- (x) to supervise and control the residence and to regulate the discipline among the students and all categories of employees and to lay down the conditions of service of such employees, including the Code of. Conduct for the students and employees;
- (xi) to create academic, administrative and support staff and other necessary posts;
- (xii) to co-operate and collaborate with other Universities in such a manner and for such purposes as the University may determine from time to time;
- (xiii) to organize and conduct refresher courses, orientation courses, workshops, seminars and other programmes for teachers, lesson writers, evaluators and other academic staff;
- (xiv) to determine standards of admission to the University or a Constituent College, Regional Centres, Study Centres with the approval of Academic



Council and to make admission of students of Karnataka not less than the extent provided in this Act;

- (xv) to do all such other acts or things whether incidental to the powers aforesaid or not, as may be necessary to further the objects of the University;
- (xvi) to institute Degrees, Diplomas, Certificates and other academic distinctions on the basis of examination or any other method of evaluation approved by the Government;
- (xvii) to provide for the preparation of instructional materials, including films, cassettes, tapes, video cassettes, CD, VCD and other software and other relevant electronic and print media.
- (xviii) to raise, collect, subscribe and borrow money with the approval of the Board of Governors whether on the security of the property of the University, for the purposes of the University;
- (xix) to acquire, takeover and run the management of any other educational institutions with the prior approval of the Government;
- (xx) to acquire properties with the prior approval of the board of management;
- (xxi) to undertake any other activities connected with or incidental to above objectives of the University.

9. University open to all classes, castes, creed, gender or nation.- The University admissions shall be open to all persons irrespective of caste, class, creed, gender or nation. All admissions shall be made on the basis of merit in the qualifying examinations:

Provided that forty percent of the admissions in all courses of the university shall be reserved for the students of Karnataka State and admissions shall be made through a Common Entrance Examination conducted by the State Government or its agency and seats shall be allotted as per the merit and reservation policy of the State Government from time to time.

Provided further that where there are less than ten seats in any course like Post Graduate, they shall be reserved by clubbing such courses together and where there are less than three posts in any course they shall be reserved by rotation.

10. National Accreditation.- The University shall seek accreditation from respective statutory national accreditation bodies soon after its establishment. Further all the courses run by Private Universities shall be as per the regulations of the National Accreditation Bodies.

11. Powers of the sponsoring body.- The sponsoring body shall have the following powers with reference to the University, each of which may be exercised by the



Sponsoring Body at its discretion, namely:-

- (i) to appoint or re-appoint or terminate the appointment of the Chancellor;
- (ii) to constitute the first Board of Governors of the University;
- (iii) to nominate the chairperson of the Board of Governors;
- (iv) to nominate three persons as members of the Board of Governors;
- (v) to nominate two persons as members of the Board of Management;
- (vi) to determine the source of funds to be contributed to the University Endowment Fund;
- (vii) to determine the application and spending of moneys by the University;
- (viii) to resolve any Conflict at the meeting of the Board of Governors in the manner provided for in this Act.

CHAPTER - III **OFFICERS OF THE UNIVERSITY**

12. Officers of the University.- The following shall be the officers of the University:-

- (i) The Visitor
- (ii) The Pro-Visitor
- (iii) The Chancellor;
- (iv) The Vice-Chancellor;
- (v) The Pro Vice-Chancellor;
- (vi) The Registrar;
- (vii) The Finance Officer;
- (viii) The Dean
- (ix) The Registrar Evaluation; and
- (x) Such other officers as may be declared by the Statutes to be officers of the University.

13. The Visitor.- (1) His Excellency the Governor of Karnataka shall be the Visitor of the University and the visitor may offer suggestions for the improvement of the functioning of the University.

(2) The visitor shall preside over the convocation of the university for conferring Degree and Diploma.

(3) The Visitor shall have the following powers, namely:-

- (i) to call for any paper or information relating to the affairs of the University;
- (ii) on the basis of the information received by the Visitor, if he is satisfied that any order, proceedings, or decision taken by any authority of the University is not in conformity with the Act, regulations or rules, he may issue such directions as he



may deem fit in the interest of the University and the directions so issued shall be complied with by all concerned.

14. The Pro-Visitor.- (1) The Hon'ble Minister for Higher Education of the Government of Karnataka shall be the Pro-Visitor of the University.

(2) The Pro-Visitor shall, when the Visitor is absent, preside at the Convocation of the University for conferring Degrees and Diplomas

15. The Chancellor.- (1) The Chancellor shall be appointed by the Sponsoring Body.

(2) The founder trustee of the Sponsoring Body shall be the first Chancellor, who shall hold for life or till he demits office.

(3) The subsequent Chancellor shall be either the then Trustee of the Sponsoring Body or such other person of eminence of national figure in the field of education, science, culture or public life, when such an appointment is being considered, as may be decided by the Sponsoring Body.

(4) The subsequent Chancellor so appointed shall hold the office as determined by the Sponsoring Body.

(5) The Chancellor shall have such powers as may be conferred on him by this Act or the Statutes made there under, which shall include the following powers; namely:-

- (i) to function as the head of the University;
- (ii) to preside at all convocations of the University in absence of visitor and pro-visitor ;
- (iii) to function as a Chairperson of the Board of Governors of the University ;
- (iv) to appoint or re-appoint or terminate the appointment of the Vice-Chancellor, in accordance with the provisions of this Act and the Statutes;
- (v) to nominate a person as a member of the Nomination Committee as referred to in sub-section (2) of section 16 of this Act;
- (vi) to pre-approve the appointment of the Pro Vice-Chancellor, the Dean, the Registrar and the Finance Officer;
- (vii) to nominate two academicians as members on the Board of Governors;
- (viii) to appoint the first Pro Vice-Chancellor and the Finance Officer;
- (ix) to constitute the first Board of Management, the Finance Committee, the Research Council and the Academic Council;
- (x) to pre-approve the Agenda matters in the manner provided for in the Act;
- (xi) to resolve a conflict (excluding conflicts at a meeting of the Board of Governors) in the manner provided for in this Act.

(6) In the event of there being a conflict inter-se between the functionary or body and any other functionary or body of the University, then the issue shall be referred to the



Chancellor and the decision of the Chancellor in respect of such issue shall be final and binding on the University.

16. The Vice-Chancellor.- (1) The Vice-Chancellor shall be appointed by the Chancellor for a term of three years subject to other terms and conditions as may be laid down by the Statutes from among three persons recommended by the Nomination Committee constituted in accordance with the provisions of sub-section (2). After the term of three years, it is renewable for another term of three years.

Provided that a Vice-chancellor shall continue to hold the office even after expiry of his term till new Vice-chancellor joins. However, in any case this period shall not exceed one year.

(2) The Nomination Committee referred to in sub-section (1) shall consist of the following persons, namely:-

- (i) One person nominated by the Chancellor;
- (ii) Two nominees of the Board of Governors, one of whom shall be nominated as the Convener of the Committee by the Board of Governors.

(3) The Nomination Committee shall, on the basis of merit, recommend three persons suitable to hold the office of the Vice-Chancellor and forward the same to the Chancellor along with a concise statement showing the academic qualifications and other distinctions of each person.

(4) The Vice-Chancellor shall be the Principal Executive and Academic Officer of the University and shall exercise general supervision and control over the affairs of the University and give effect to the decisions of the authorities of the University.

Provided that, where any matter, other than the appointment of a Teacher is of urgent nature requiring immediate action and the same could not be immediately dealt with by any officer or the authority or other body of the University empowered by or under this Act to deal with it, the Vice-Chancellor may take such action as he may deems fit with the prior written approval of the Chancellor.

(5) The Vice-Chancellor shall exercise such other powers and perform such other duties as may be laid down by the Statutes or the Rules.

Provided that, where in the opinion of the Vice-chancellor, any decision of any authority of the university is outside the powers conferred by this Act or Statutes, regulations or rules made there under or is likely to be prejudicial to the interests of the university, he shall request the concerned authority to revise its decision within fifteen days from the date of its decision and in case the authority refuses to revise such decision wholly or partly or fails to take any decision within fifteen days, then such matter shall be referred to the Chancellor and his decision thereon shall be final.



(6) The services of the Vice-Chancellor can be terminated by the Chancellor with the approval of the Board of Governors after following the principles of natural justice and after providing an opportunity to present his case including for termination on disciplinary grounds.

(7) The Vice-Chancellor shall preside at the convocation of the University in the absence of the Visitor, Pro-Visitor and the Chancellor.

17. The Pro Vice-Chancellor.- The Chancellor shall appoint not exceeding three pro-vice Chancellors with the Written approval of the Chancellor in such manner and they shall exercise such powers and perform such duties as may be laid down by the Statutes.

18. Deans of Faculties.- Deans of Faculties shall be appointed by the Chancellor with the written approval of the Chancellor in such manner and they shall exercise such powers and perform such duties as may be laid down by the Statutes.

19. The Registrar.- (1) The Registrar shall be appointed by the Chancellor in such manner and on such terms and conditions as may be laid down by the Statutes.

(2) All contracts as defined in statutes shall be entered into and signed by the Registrar on behalf of the University.

(3) The Registrar shall have the power to authenticate records on behalf of the University and shall exercise such other powers and perform such other duties as may be conferred by the statutes or may be required from time to time, by the Chancellor or the Vice-Chancellor.

(4) The Registrar shall be responsible for the due custody of the records and the common seal of the University and shall be bound to place before the Chancellor, the Vice-Chancellor or any other authority, all such information and documents as demanded.

20. The Finance Officer.- The Finance Officer shall be appointed by the Vice-Chancellor with the written approval of the Chancellor in such manner and he shall exercise such powers and perform such duties as may be conferred by the Statutes.

21. Other Officers.- The manner of appointment, terms and conditions of service and powers and duties of the other officers of the University shall be such as may be specified by Statutes.

CHAPTER - IV

AUTHORITIES OF THE UNIVERSITY

22. Authorities of the University.- The following shall be the authorities of the University, namely:-

- (i) The Board of Governors;
- (ii) The Board of Management;
- (iii) The Academic Council;
- (iv) Research Council;



- (v) The Finance Committee; and
- (vi) Such other authorities as may be declared by the Statutes to be the authorities of the University.

23. The Board of Governors and its powers.-(1) The Board of Governors shall consist of the following, namely:-

- (i) The Chancellor- Chairperson;
- (ii) The Vice-Chancellor- Member;
- (iii) The Principal Secretary/Secretary to the State Government in the Higher Education or by his nominee not below the rank of Deputy Secretary ;
- (iv) The Principal Secretary/ Secretary to the Government in the Medical Education or by his nominee not below the rank of Deputy Secretary;
- (v) One expert from the field of management, finance or any other specialized, including administration to be nominated by the State Government;
- (vi) ¹[three persons]¹ nominated by the Sponsoring Body of whom one shall be woman;
- (vii) The Pro Vice-Chancellor who shall be a non-voting member;
- (viii) One eminent educationist nominee of the university grant commission;
- ²[(ix) Two academicians nominated by the Chancellor]².

(2) The Registrar shall be non-voting member secretary of the Board of Governors.

(3) The tenure of office of the members of the Board of Governors, appointment of members, other than Government nominees, renewal and removal, etc., shall be such as may be laid down by the Statutes.

(4) All meetings of the Board of Governors shall always be chaired by the Chancellor and in his absence by any one of the nominees of the Chancellor. If Chancellor has not nominated any person to Chair such a meeting, members present in the meeting shall elect the Chairperson for that meeting only from among themselves by a simple majority.

(5) Quorum for all meetings of the Board of Governors, shall be three members attending and voting at such meeting.

Provided that the presence of either the Chancellor or one nominee of the Sponsoring Body and in the absence of the Chancellor or one nominee of Sponsoring Body, the Vice Chancellor, shall always be necessary to form the quorum for any meeting of the Board of Governors.

(6) The Board of Governors shall be the Principal Governing Body of the



University and shall have the following powers, namely:

- (i) to appoint the Statutory Auditors of the University;
- (ii) to lay down policies to be pursued by the University;
- (iii) to review decisions of the other authorities of the University if they are not in conformity with the provisions of this Act, or the Statutes or the Rules;
- (iv) to approve the Budget and Annual Report of the University;
- (v) to make new or additional Statutes or amend or repeal the earlier Statutes and Rules;
- (vi) to take decision about voluntary winding up of the University;
- (vii) to approve proposals for submission to the Government;
- (viii) to nominate three members to the Fee Regulation Committee
- (ix) to take such decisions and steps as are found desirable for effectively carrying out the objects of the University.

(7) The Board of Governor shall, meet at least three times a year.

(8) No resolution shall be passed or decision be taken by the Board of Governors at their meeting, in respect of any Agenda Matters except pursuant to an affirmative vote by the Chancellor in favour of the Agenda Matter.

(9) In the event of a conflict of opinion at a meeting of the Board of Governors, then the issued shall be referred to the Sponsoring Body and the decision of the Sponsoring Body in respect of such issue shall be final and binding on the University.

1. Substituted by Act 13 of 2019 w.e.f. 02.03.2019

2. Inserted by Act 13 of 2019 w.e.f. 02.03.2019

24. The Board of Management.- (1) The Board of Management shall consist of the following, namely:-

- (i) The Vice Chancellor;
- (ii) The Pro-Vice Chancellor;
- (iii) The Registrar;
- (iv) Two nominees of the Sponsoring Body;
- (v) Two Deans of the schools as nominated by the Chancellor.
- (vi) The Registrar Evaluation

(2) The Vice Chancellor shall be the Chairperson of the Board of Management and the Registrar in the absence of the Registrar the Registrar Evaluation with the prior approval of the Chancellor shall be the Secretary of the Board of Management.

(3) The Board of management shall be the executive body of the University. The powers and functions of the Board of Management shall be such as may be specified



by the statutes.

(4) All meetings of the Boards of Management, shall always be chaired by the Vice Chancellor and in the absence of the Vice Chancellor, by the nominee of the Sponsoring Body and where the Sponsoring Body has not nominated any nominees, then by any other member as elected by the members present in the meeting.

(5) In the event of a conflict of opinion at a meeting of the Board of Management, the issue shall be referred to the Chancellor and the decision of the Chancellor in respect of such issue shall be final and binding on the University.

25. The Academic Council.- (1) The Academic Council shall consist of the following, namely:-

- (i) The Vice-Chancellor - Chair Person
- (ii) The Pro Vice Chancellor – Member
- (iii) The Registrar - Secretary
- (iv) Such other members as may be specified by-the Statutes.
- (v) The Registrar Evaluation –Member
- (vi) One nominee of the Chancellor - Member

(2) The Academic Council shall be the principal academic body of the University and shall, subject to the provisions of this Act, the Statutes, Regulations and the Rules, co-ordinate and exercise general supervision over the academic policies of the University.

26. The Research Council.- (1) The Research Council shall be the Principal Research Committee of the University and shall provide the larger holistic vision of the kind of research to be undertaken by the University, including prioritization of the research areas. This Council shall, subject to the provisions of this Act, the Statutes, Regulations and the Rules, co-ordinate and exercise general supervision over the Research and innovation policies of the University.

(2) The Research Council shall consist of the following, namely:-

- (i) The Vice-Chancellor - Chair Person
- (ii) The Pro Vice Chancellor - Member
- (iii) The Dean of Research - Secretary
- (iv) Head of the Department of Innovation - Member
- (v) Deans of all Faculties – Members and
- (vi) Such other members as may be specified in the Statutes.

27. The Finance Committee.- (1) The Finance Committee shall consist of the following, namely:-

- (i) The Chancellor– Chairperson



- (ii) The Vice-Chancellor – Member
- (iii) The Registrar – Member
- (iv) The Finance Officer – Secretary
- (v) One nominee of the Chancellor – Member; and
- (vi) Such other members as may be specified by the statutes.
- (vii) The Registrar Evaluation _ Member

(2) The Finance Committee shall be the principal financial body of the University to take financial matters and shall, subject to the provisions of this Act, rules and statutes, undertake Co-ordination exercise, general supervisions over the financial matters of the University.

28. Other Authorities.- The constitution, the powers and functions of the other authorities of the University shall be such as may be specified by the statutes.

29. Disqualification for membership of an Authority or Body: A person shall be disqualified for being a member of any of the authorities of bodies of the University, if he;

- (a) is of unsound mind and stands so declared by a competent court;
- (b) is an un discharged insolvent;
- (c) has been convicted of any offence involving moral turpitude;
- (d) is conducting or engaging himself in private coaching classes; or
- (e) has been punished for indulging in or promoting unfair practice in the conduct of any examination, in any form, anywhere.
- (f) As and when the Sponsoring Body were to form an opinion in writing that a Member of any of the authorities or bodies is unfit to hold the post.

30. Proceedings not invalidated on account of Vacancy.- No act or Proceedings of any authority of the University shall be invalid merely by reason of the existence of any vacancy or defect in the constitution of the Authority.

31. Provisions pertaining to Agenda Matters.- (1) No agenda Matter shall be either included in the Agenda for or taken up for discussion or decided in the meeting of the Board of Governors or the Board of Management or any Committee without obtaining the prior approval of the Chancellor.

(2) In the event of breach of any provisions of this Act, the Chancellor shall be entitled at all time to immediately take remedial action by reversing all decisions taken by any functionary or body of University and consequent upon the pursuit of such a remedial action all such actions taken by the functionary or body of the university in breach of the provisions of the Act shall be deemed to be null and void ab initio and



consequently ; status quo ante shall prevail in respect of the matter or decision in breach.

CHAPATER – V

STATUTES AND REGULATIONS

32. Statutes.- Subject to the provisions of this Act, the Statutes may provide for all or any matter, relating to the University and staff as given below, namely: -

- (i) the procedure for transaction of business of the Authorities of the University and the composition of bodies not specified in this Act.
- (ii) the operation of the permanent statutory endowment fund, University endowment fund, the general fund and the development fund,
- (iii) the terms and conditions of appointment of the Vice-Chancellor, the Registrar and the Finance Officer and their powers and functions,
- (iv) the mode of recruitment and the terms and conditions of service of the other officers, Teachers and employees of the University;
- (v) the procedure for resolving disputes between the University and its officers, Faculty members, employees and students;
- (vi) creation, abolition or restructuring of departments and faculties;
- (vii) the manner of co-operation with other Universities or institutions of higher learning.;
- (viii) the procedure for conferment of honorary degrees;
- (ix) provisions regarding grant of freeships and scholarships;
- (x) policies in respect of seats in different courses of studies and the procedure of admission of students to such courses;
- (xi) policy relating to the fee chargeable from students for various courses of studies;
- (xii) institution of fellowships, scholarships, studentships, free ships, medals and prizes;
- (xiii) any other matters which may be decided by the Board of Governors or required to be provided by statutes under this Act.

33. Statutes how made.- (1) The first statutes framed by the Board of Management shall be submitted to the Board of Governors for its approval.

(2) The Board of Governors shall consider the First Statutes, submitted by the Board of Management and shall give its approval thereon with such modifications, if any, as it may deem necessary.

(3) The University shall publish the First Statutes, as approved by the Board of Governors in the University Notification, and thereafter, the First Statutes shall come into



force from the date of its publication.

34. Power to amend the Statutes.- The Board of Governors may, make new or additional Statutes or amend or repeal the statutes;

35. Regulations.- Subject to the provisions of this Act, the regulations may provide for the following matters, namely:-

- (i) admission of students to the University and their enrolment and continuance as such;
- (ii) the courses of study to be laid down for all degrees and other academic distinctions of the University;
- (iii) the award of degrees and other academic distinctions;
- (iv) the conditions of the award of fellowships, scholarships, studentships, medals and prizes;
- (v) the conduct of examinations and the conditions and mode of appointment and duties of examining bodies, examiners invigilators, tabulators and moderators;
- (vi) the fee to be charged for admission to the examinations, degrees and other academic distinctions of the University;
- (vii) the conditions of residence of the students at the University or a Constituent College;
- (viii) maintenance of discipline among the students of the University or a Constituent College;
- (ix) all other matters as may be provided in the Statutes under the Act.

36. Regulations how made.- The Regulations shall be made by the Academic Council and approved by Board of Management.

37. Power to amend Regulations.- The Academic Council may, with the approval of the Board of Management, make new or additional regulations or amend or repeal the regulations.

38. Fee Regulation Committee.- (1) The fee of the university seats reserved for Karnataka Students under section 9 shall be regulated by the Fee Regulation Committee constituted by the Government which shall be headed by a retired Supreme Court or High Court Judge and consists of Chancellor, Vice-Chancellor of the University, Principal Secretary or Secretary to Government incharge of Higher Education or by his nominee not below the rank of Deputy Secretary, Principal Secretary or Secretary to Government incharge of Medical Education or by his nominee not below the rank of Deputy Secretary, two Academicians nominated by the Board of Governors of whom one shall be woman. A Chartered Accountant of repute shall be co-opted for this purpose in the Committee.



(2) The Committee shall look after the compliance of the university in its admissions and collection of fee.

CHAPTER - VI

MISCELLANEOUS

39. Conditions of service of employees.- (1) Every employee shall be appointed under a written contract subject to such terms and conditions as may be specified by statutes and regulations or prescribed if any by rules which shall be kept in the University and a copy of which shall be furnished to the employee concerned.

(2) Disciplinary action against the employees shall be governed by the procedure specified in the Statutes.

(3) Any dispute arising out of the contract between the University and an employee shall, be resolved in the manner provided for in the written contract and in accordance with the Statutes.

40. Right to appeal.- In case of disciplinary actions by the University against its employee or student, the aggrieved employee or students shall have a right to appeal to such authority as specified by the statutes.

41. Provident or pension fund.- The University shall constitute for the benefit of its employees such provident or pension fund and provide such insurance scheme as it may deem fit in such manner and subject to such conditions as may be specified by the statutes and the laws in force.

42. Disputes as to constitution of University authorities and bodies.- If any question arises as to whether any person has been duly elected or appointed as, or is entitled to be a member of any authority or other body of the University, the matter shall be referred to the Chancellor whose decision thereon shall be final.

43. Constitution of Committees.- Any authority of the University mentioned in section 22, shall be empowered to constitute a committee of such authority, consisting of such members having such powers as the authority may deem fit.

44. Filling of casual vacancies.- Any casual vacancy among the members, other than ex-officio members of any Authority or body of the University shall be filled in the same manner in which the member whose vacancy is to be filled up, was chosen, and the person filling the vacancy shall be a member of such authority or body for the residual term for which the person in whose place he would have been a member.

45. Protection of action taken in good faith.- No suit or other legal proceedings shall lie against any officer or other employee of the University for anything, which is done in good faith or intended to be done in pursuance of the provisions of this Act, the Statutes or the Rules.



46. Transitional provisions.- Notwithstanding anything contained in any other provisions of this Act and the Statutes:-

- (i) the first Vice-Chancellor and Pro-Vice-Chancellor, if any shall be appointed by the Chancellor;
- (ii) the first Registrar, the first Registrar Evaluation and the first Finance Officer shall be appointed by the Chancellor; and
- (iii) the first Board of Management, the first Finance Committee, the first Research and innovation Council and the first Academic Council shall be constituted by the Chancellor.

47. Permanent Statutory Endowment Fund.- (1) The University shall establish a Permanent Statutory Endowment Fund of at least rupees twenty five crores out of which at least fifteen crores shall be in cash and remaining in the form of Bank guarantee which may be increased suo moto but shall not be decreased.

Provided that in case of a University outside the Bangalore or Bangalore Rural District at least ten crores must be in form of cash and the remaining five crores shall be in form of Bank Guarantee.

(2) The University shall have power to invest the permanent Statutory Endowment Fund in such manner as may be prescribed.

(3) The University may transfer any amount from General Fund or the Development fund to the permanent statutory fund except in the event of the dissolution of the University, in no other circumstances can any moneys be transferred from permanent Statutory Endowment Fund for any other purposes.

(4) Seventy five percent of the income received from permanent Statutory Endowment Fund shall be used for the purpose of development or general work of the University. The remaining twenty five percent shall be invested in the permanent Statutory Endowment Fund.

48. University Endowment Fund.- (1) The University shall establish a University Endowment Fund having such funds as may be determined by the Sponsoring Body which can include donations and other funds received from time to time.

(2) The University shall have the power to invest the University Endowment Fund in a manner as may be specified by the Statutes.

(3) The University Endowment Fund is a self-imposed fund that the University desires to maintain voluntarily and invest it responsibly to protect itself from financial challenges that may arise on account of pursuing social objectives and/or unforeseen circumstance.

(4) The University may transfer any amount from the General Fund or the



development fund to the University Endowment Fund. Excepting in the dissolution of the University, in no other circumstances moneys can be transferred from the University Endowment Fund for other purposes.

(5) Eighty percent of the incomes received from the University Endowment Fund shall be used for the purposes of development or general work of the University. The remaining twenty percent shall be reinvested into the University Endowment Fund.

49. General Fund.- (1) The University shall establish a General Fund to which the following amount shall be credited, namely:-

- (i) all fees which may be charged by the University;
- (ii) all sums received from any other source not prohibited by any law for the time being in force;
- (iii) all contributions made to the University;
- (iv) all contributions/donations made in this behalf by any other person or body which are not prohibited by any law for the time being in force.

(2) The funds credited to the General Fund shall be applied to meet all the recurring expenditure of the University.

50. Development fund.- (1) The University shall also establish a Development Fund to which the following funds shall be credited, namely:-

- (i) development fees which may be charged from students;
- (ii) all sums received from any other source for the purposes of the development of the University;
- (iii) all contributions made to the University;
- (iv) all contributions/donations made in this behalf by any other person or body which are not prohibited by any law for the time being in force; and
- (v) all incomes received from the Permanent Statutory Endowment Fund.

(2) The funds credited to the Development Fund from time to time shall be utilized for the development of the University.

51. Maintenance of funds.- The funds established under sections 47, 48, 49 and 50 shall, subject to general supervision and control of the Board of Governors, be regulated and maintained in such manner as may be prescribed.

52. Annual Report.-(1) The annual report of the University shall be prepared under the direction of the Board of Management and shall be submitted to the Board of Governors for its approval.

(2) The Board of Governors shall consider the annual report in its meeting and may approve the same with or without modification.

(3) A copy of the annual report duly approved by the Board of Governors shall be



sent to the State Government before 31st December following close of the financial year in 31st March of each year.

53. Account and audit.- (1) The annual accounts and balance sheet of the University shall be prepared under the direction of the Board of Management and all funds accruing to or received by the University from all source and all amount disbursed or paid shall be entered in the account maintained by the University.

(2) The annual accounts of the University shall be audited by an auditor, who is a member of the Institute of Chartered Accountants of India, every year.

(3) A copy of the annual accounts and the balance sheet together with the audit report shall be submitted to the Board of Governors before 30th November following close of the financial year in 31 March of each year.

(4) The annual accounts, the balance sheet and the audit report shall be considered by the Board of Governors at its meeting and the Board of Governors shall forward the same to the visitor and the Government along with its observation thereon on or before 31st December of each year.

(5) In the event of any material alteration in the Report of the Auditors, the State Government may issue directions to the University, and such directions shall be binding on the University.

54. Mode of proof of University record.- A copy of any receipt, application, notice, order, proceeding or resolution of any authority or committee of the University or other documents in possession of the University or any entry in any register duly maintained by the University, if certified by the Registrar, shall be received as prima facie evidence of such receipt, application, notice, order, proceeding, resolution or document or the existence of entry in the register and shall be admitted as evidence of the matters and transaction therein recorded where the original thereof would, if produced, have been admissible in evidence.

55. Power of State Government to issue directions.- The State Government may give such directions to the University as in its opinion are necessary or expedient for carrying out the purposes of this Act or to give effect to any of the provisions contained therein or of any rules or orders made thereunder and the Board of Governor or the Board of management, as the case may be, of the University shall comply with every such direction.

56. Penalties.- (1) Whoever contravenes the provisions of this Act or the rules made thereunder or any examination matters or in matters relating to award of degrees or in giving marks cards shall on conviction be punishable with fine of rupees fifty thousand which may extend to ten lakhs rupees or with an imprisonment for a term of six months which may extend to two years or with both.



Provided that, where the University is also involved the permission letter granted under this Act to commence the University shall be withdrawn.

(2) A penalty under this section may be imposed without prejudice to the penalty specified in any other Act.

57. Power to enter and inspect.- Any officer not below the rank of Group 'A' officer authorised by the State Government in this behalf, shall, subject to such conditions as may be specified therein under the Karnataka Educational Institutions (Prohibition of Capitation Fee) Act, 1984 (Karnataka Act 37 of 1984) shall be deemed to be the Officer authorized to exercise the same powers and discharge the same functions as provided under section 9 of that Act for the purposes of this Act.

58. Power to give direction for dissolution of the University.- (1) If the University proposes dissolution in accordance with the law governing its constitution or incorporation, it shall give at least six months prior notice in writing to the Government.

(2) The Karnataka State Higher Education Council shall conduct periodical Inspection of University regarding;-

- (i) Standard of Instructions for grant of degree;
- (ii) Quality of Education;
- (iii) Avoidance of commercialisation of Higher Education;
- (iv) contravention of the provisions of the Act if any;

-and send report to the Government.

(3) On identification of mismanagement, maladministration and indiscipline, the Government shall issue directions to the management of the University to set right the administration. If the direction is not followed within such time as may be prescribed, the right to take decision for winding up of the University or any course thereof shall vest with the Government.

(4) The manner of winding up of the University or any course thereof shall be such as may be prescribed by the Government in this behalf.

Provided that no such action shall be initiated without affording a reasonable opportunity to show cause to the University.

(5) On receipt of the notice referred to in sub-section (1), the Government shall, in consultation with the relevant Regulatory Authority make such arrangements for administration of the University from the proposed date of dissolution of the University or winding up of the course and until the last batch of students in regular courses of studies of the University complete their courses of studies in such manner as may be specified by the Statutes.

59. Expenditure of the University during dissolution.-(1) The expenditure of



administration of the University during taking over period of its management under sub-section (5) of section 58 shall be met out of the Permanent Statutory Endowment Fund, the General Fund or the Development Fund in such manner as may be prescribed.

(2) If the fund referred to in section 47, 48, 49 and 50 are not sufficient to meet the expenditure of the University during the taking over period of its management, such expenditure may be met by disposing of the properties or asset of the University, by the Government.

(3) Where the dissolution of the University is due to mismanagement or maladministration, the Government is at liberty to identify the persons responsible for such mismanagement or maladministration and to impose penalty as it deems fit.

60. Removal of difficulties.- (1) If any difficulty arises in giving effect to the provisions of this Act, the State Government may, by a notification or by order, make such provisions, which are not inconsistent with the provisions of this Act, as appear to it to be necessary or expedient, for removing the difficulty:

Provided that, no notification or order under this section shall be made after the expiry of a period of five years from the date of commencement of this Act.

(2) Every Order made under sub-section (1), shall, as soon as may be after it is made, be laid before the State Legislature.

61. Power to make rules by the State Government.- (1) The State Government may make rules, by notification, to carryout the purposes of this Act.

(2) Every rule made under this Act shall be laid as soon as may be after it is made before each House of the State Legislature while it is in session for a total period of thirty days which may be comprised in one session or in two or more successive sessions, and if, before the expiry of the session immediately following the session or the successive sessions aforesaid, both Houses agree in making any modification in the rule or both Houses agree that the rule should not be made, the rule shall thereafter have effect only in such modified form or be of no effect, as the case may be, so however, that any such modification or annulment shall be without prejudice to the validity of anything previously done under that rule.

The above translation of ಆದಿಚುಂಚನಗಿರಿ ವಿಶ್ವವಿದ್ಯಾಲಯ ಅಧಿನಿಯಮ, 2012 (2013ರ ಕರ್ನಾಟಕ ಅಧಿನಿಯಮ ಸಂಖ್ಯೆ 18) be published in the Official Gazette under clause (3) of Article 348 of the Constitution of India.

H.R. BHARDWAJ
GOVERNOR OF KARNATAKA



By Order and in the name of
the Governor of Karnataka,

K.S.Mudagal

Secretary to Government(I/C)
Department of Parliamentary Affairs and Legislation

KARNATAKA ACT NO. 13 OF 2019

(First Published in the Karnataka Gazette Extra-ordinary on the Second day of March 2019)

THE ADICHUNCHANAGIRI UNIVERSITY (AMENDMENT) ACT, 2019

(Received the assent of the Governor on the twenty eighth day of February 2019)

An Act to amend the Adichunchanagiri University Act, 2012.

Whereas it is expedient to amend the Adichunchanagiri University Act, 2012 (Karnataka Act 18 of 2013) for the purposes hereinafter appearing;

Be it enacted by the Karnataka State Legislature in the seventieth year of the Republic of India, as follows:-

1. Short title and commencement.- (1) This Act may be called the Adichunchanagiri University (Amendment) Act, 2019.

(2) It shall come into force at once.

Section 23 is incorporated in the Principal Act,



KARNATAKA ACT NO. 20 OF 2013
DAYANANDA SAGARA UNIVERSITY ACT, 2012

Arrangement of Sections

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STATEMENT OF OBJECTS AND REASONS

Act No.20 of 2013.- The Mahatma Gandhi Vidya Peetha Trust have come forward to establish private University in the State. The establishment of a private university by a well-known organization would certainly help in spreading the quality education to the needy students. This also accelerates the enhancement of gross enrolment ratio in the higher education sector which presently stands at 11.5% in Karnataka.

Keeping in view the above, it is considered necessary to provide for establishment of Dayananda Sagar University.

This private university focuses on teaching, training, research and development in the fields of Life Sciences, IT, all branches of Engineering, Architecture, Management, Health Care Education to include: Medicine, Dentistry, Pharmacy, Physiotherapy, Nursing, Allied Health and allied sectors and for the matters connected therewith or incidental thereto.

Hence, the Bill.

[L.A. Bill No.33 of 2012, File No. Samvyashae 44 Shasana 2012]

[Entry 25 of List III of the Seventh Schedule to the Constitution of India.]



KARNATAKA ACT NO. 20 OF 2013

(First Published in the Karnataka Gazette Extra-ordinary on the
Twenty seventh day of February, 2013)

DAYANANDA SAGARA UNIVERSITY ACT, 2012

(Received the assent of the Governor on the Twenty fifth day of February, 2013)

An Act to establish and incorporate in the State of Karnataka a University of unitary in nature in private sector by the Mahatma Gandhi Vidya Peetha Trust to promote and undertake the advancement of applied University education in Life Sciences, Information Technology, all branches of Engineering, Architecture, Management, Health Care Education to include Medicine, Dentistry, Pharmacy, Physiotherapy, Nursing, Allied Health and allied sectors and for the matters connected therewith or incidental thereto.

Whereas it is expedient to establish and incorporate in the State of Karnataka a University of unitary in nature in private sector by the Mahatma Gandhi Vidya Peetha Trust to promote and undertake the advancement of applied University Education in Life Sciences, Information Technology, all branches of Engineering, Architecture, Management, Health Care Education to include Medicine, Dentistry, Pharmacy, Physiotherapy, Nursing, Allied Health and allied sectors and for the matters connected therewith or incidental thereto for the purposes hereinafter appearing;

Be it enacted by the Karnataka State Legislature in the sixty third year of the Republic of India as follows:-

CHAPTER - I

PRELIMINARY

1. Short title, extent and commencement. - (1) This Act may be called the Dayananda Sagar University Act, 2012.

(2) It extends to the whole of the State of Karnataka.

(3) It shall come into force on such date as the State Government may, by notification, in the official Gazette, appoint.

This Act has come into force w.e.f. 16.05.2014. by Notification No.Er 95 ಯಾಜ್ಞೋ¹ 2014,

Dated:16.05.2014.

(See the text of the notification at the end of the Act)

2. Definitions.- In this Act, unless the context otherwise requires,-



- (a) "Academic Council" means the Academic Council of the University as specified in section 25;
- (b) "Agenda Matters" means all the matters and business to be designated in the Statutes each of which can be either included in the Agenda or be taken up for discussion and decision at a meeting of the Board of Governors or the Board of Management or any Committees, as the case may be, only subject to the prior written approval of the Chancellor, consenting to the passing of such matters and business at such a meeting;
- (c) "Board of Governors" means the Board of Governors of the University as specified in section 23;
- (d) "Board of Management" means the Board of Management of the University as specified in section 24;
- (e) "Chancellor", "Vice-Chancellor", "Pro Vice-Chancellor" means respectively the Chancellor, Vice Chancellor and Pro Vice Chancellor of the University;
- (f) "Campus" means a campus established, maintained by the University, wherever situated;
- (g) "Committees" means the committees formed under this Act or by the various functionaries of the University as the case may be and includes the Nomination Committee, the Finance Committee and such other committees;
- (h) "Constituent College" means a college or institution established and maintained by the University;
- (i) "Finance Committee" means the Finance Committee of the University as specified in section 27;
- (j) "Government" means the Government of Karnataka;
- (k) "National Accreditation Bodies" means a body established by the Central Government for laying down norms and conditions for ensuring academic standards of higher education, such as University Grants Commission, All India Council of Technical Education, Medical Council of India, Pharmaceutical Council of India, Indian Council of Agriculture Research, National Assessment and Accreditation Council, National Council of Teacher Education,



Distance Education Council, Council of Scientific and Industrial Research, and includes the Government;

- (l) "Prescribed" means prescribed by rules made by the Government under this Act;
- (m) "Principal in relation to a Constituent College" means the head of the Constituent College and includes, where there is no Principal or in the absence of a Principal appointed, the Vice-Principal or any other person for the time being appointed to act as Principal;
- (n) "Registrar" means the Registrar of the University;
- (o) "Regional Centre" means a centre established or maintained by the University for the purpose of coordinating and supervising the work of Study Centres in any region and for performing such other functions as may be conferred on such centre by the Board of Management;
- (p) "Sponsoring Authority" or "sponsoring body" in relation to this Act means the Trust;
- (q) "State" means State of Karnataka;
- (r) "Statutes" and "Regulations" means respectively, the Statutes and Regulations of the university made under this Act;
- (s) "Study centre" means a centre established and maintained by the university for the purpose of advising, counseling or for rendering any other assistance required by the students in the context of education;
- (t) "Teacher" means and includes a Professor, Associate Professor, Assistant Professor, or such other person as may be appointed for imparting instruction or conducting or to guide research in the University or in a Constituent College and includes the Principal of Constituent College in conformity with the norms prescribed by the 'University Grants Commissions;
- (u) "Trust" means Mahatma Gandhi Vidya Peetha Trust;
- (v) "University Grants Commission" means the Commission established under section 4 of the University Grants Commission Act, 1956 (Central Act 3 of 1956);
- (w) "University" means the Dayananda Sagar University, established and incorporated under this Act;



- (x) "Visitor" means the visitor of the University as specified in section 13.

CHAPTER - II

THE UNIVERSITY AND SPONSORING BODY

3. Proposal for the establishment of the University.- (1) The Trust shall have the right to establish the University of unitary in nature subject to and in accordance with the provisions of this Act.

(2) The proposal to establish a University shall be made to the State Government by the Trust.

(3) The proposal shall contain the following particulars, namely:-

- (i) the objects of the University along with the details of the Trust;
- (ii) the extent and status of the University and the availability of land;
- (iii) the nature and type of programmes of study and research to be undertaken by the University during a period of five academic years immediately following the commencement date;
- (iv) the nature of faculties, courses of study and research proposed to be started;
- (v) the campus development such as buildings, equipment and structural amenities;
- (vi) the phased outlays of capital expenditure for a period of five academic years immediately following the commencement date;
- (vii) the item-wise recurring expenditure, sources of finance and estimated expenditure for each student;
- (viii) the scheme for mobilizing resources and the cost of capital thereto and the manner of repayments to each source;
- (ix) the scheme of generation of funds internally through the recovery of fee from students, revenues anticipated from consultancy and other activities relating to the objects of the University and other anticipated incomes;
- (x) the details of expenditure on unit cost, the extent of concessions or rebates in fee, freeship and scholarship for students belonging to economically weaker sections and the fee structure indicating varying rate of fee, if any, that would be levied on students who are either non resident Indians or



persons of Indian origin or sponsored by non resident Indians or persons of Indian origin and students of nationalities other than India;

(xi) the years of experience and expertise in the concerned discipline at the command of the Trust; as well as the financial resources;

(xii) the system for selection of students to the courses of study at the University; and

(xiii) status of fulfillment of such other conditions as may be required by the State Government to be fulfilled before the establishment of the University.

(4) A Screening Committee shall be constituted by the State Government consisting of three member who are Ex-officio members of Karnataka State Higher Education Council to examine the proposals received, which shall make recommendations to the State Government.

4. Establishment of the University.- (1) Where the State Government, after considering the recommendations of the screening Committee and holding such inquiry as it may deem necessary, is satisfied that,-

- (i) the Trust has ability to run an University with sufficient infrastructure.
- (ii) owns a land to the extent specified below in accordance with its location, namely:-
 - (a) twenty five acres of land if it is within limits of Bruhat Bangalore Mahanagara Palike;
 - (b) forty acres of land if it is out side the limits of Bruhat Bangalore Mahanagara Palike but within Bangalore Metropolitan Region Development Authority area;
 - (c) not less than sixty acres of land in the places other than the places specified in clauses (a) and (b).

The land specified above shall consist of a single block and it shall be in the name of concerned trust/foundation/institution/ university itself. Based on the furnished particulars required in sub-section (3) of section 3, the Government may direct the Trust to establish the permanent Statutory Endowment Fund as specified in section 47.

(2) After the establishment of the Permanent Statutory Endowment Fund, the State Government may, by notification, in the official Gazette, accord sanction for establishment of the University of unitary in nature in the State by the name of “Dayananda Sagar University”.



(3) The headquarters of the University shall be at Bangalore. The University shall have Campuses or Regional Centres, Study Centres anywhere in Karnataka and subject to the prior permission of the State Government and as per UGC norms.

(4) The First Chancellor, the First Vice-Chancellor, First members of the Board of Governors, First members of the Board of Management and the Academic Council and all persons who may hereafter become such officers or members, so long as they continue to hold such office or membership, shall constitute a body corporate and can sue and be sued in the name of the University.

(5) On sanction for the establishment of the University under sub-section (2), the land and other movable and immovable properties acquired, created, arranged or built by the Trust for the purpose of the University shall vest in the University.

(6) In all suits and other legal proceedings by or against the University, the pleading shall be signed and verified by, and all processes in such suits and proceedings shall be issued to and be served on the Registrar.

(7) The land, building and other properties of the University shall not be used for any purpose other than incidental to the objects of the University.

5. Grants and Financial Assistance.- The University shall be self-financing and shall neither make a demand nor shall be entitled to any maintenance grant-in-aid or any other financial assistance from the State or any other body or corporation owned or controlled by the State:

Provided that the State may, provide financial support through grants or otherwise,-

(a) for research, development and other activities for which other State Government organizations are provided financial assistance; or

(b) for any specific research or programmes receiving support from the State Government; and

(c) for the benefit of similar universities in the State whether subject to a change in State policy or otherwise:

Provided further that the university may receive any financial support from any other source.

6. Power to establish constituent College, additional campuses, Regional Centres or Study Centres.- The University may have Constituent



Colleges, Regional Centres, additional campuses and Study Centres at such places in the State as it deems fit after the completion of five years after its establishment with prior approval of the State Government subject to norms of UGC and other National Accreditation bodies.

7. Objects of the University. - The University shall employ a broad range of strategies to achieve its vision and objectives,-

(i) to provide instruction, teaching, training, research, consultancy and development in various disciplines in areas such as Technical Education, in Finance, in Management, Teaching-Learning, Technology in Professional Education, Health Care to Include Medicine, Dentistry, Pharmacy, Nursing, Allied Health and including other allied fields of development and make provisions for research, advancement and dissemination of knowledge on these fields;

(ii) to design and deliver high quality training, capacity building and development systems for teachers in higher and professional education, administrators and professionals working in Government, Public and Private Sectors and development professionals in other systems;

(iii) to develop resource centers to contribute to quality education;

(iv) to establish Campuses and have study centers, Constituent Colleges and Regional Centres at various locations in Karnataka and to contribute and develop an understanding of educational changes in Technical and professional education and social and human development as per norms of the University Grants Commission with prior approval of the State Government;

(v) to institute degrees, diplomas, certificates and other academic distinctions like award of credits on the basis of successful completion of academic work evaluated through multiple methods of assessment;

(vi) to collaborate with any other universities, research institutions, non-profit organizations, industry association, professional associations or other organizations, to conceptualize, design, develop and offer specific educational and research programmes, training programmes and exchange programmes for students, faculty members and others;

(vii) to disseminate knowledge and develop a public debate on issues of education and allied development fields through seminars, conferences, executive education programmes, community development programmes, publications and training programmes and events;



(viii) to undertake programmes for development and training of faculty and researchers of the University in partnership with any other institutions of quality with prior approval of the State Government;

(ix) to undertake collaborative research and advocacy with any organizations with prior approval of the State Government;

(x) to undertake necessary or expedient action to pursue and promote the objectives of the University;

(xi) to pursue any objectives as may be approved by the Government for the enhancement of the education and other development sectors.

8. Powers of the University. - The University shall have the following powers, namely:-

(i) to establish and maintain Campuses, Regional Centres and Study Centres in Karnataka as may be determined by the University from time to time in the manner laid down by the Statutes with prior approval of the Government and as per UGC norms;

(ii) to carry out all such other activities as may be necessary or feasible in furtherance of the object of the University;

(iii) to confer degrees or other academic distinctions in the manner and under conditions laid down in the Statutes;

(iv) to institute and award fellowships, scholarships and prizes, awards, medals etc., in accordance with the Statutes;

(v) to demand and receive such fees, bills, invoices and collect charges as may be fixed by the Statutes or rules, as the case may be;

(vi) to make provisions for extracurricular activities for students and employees;

(vii) to make appointments of the Faculty, officers and employees of the University or a Constituent College, Campuses, Regional Centres, Study Centres;

(viii) to receive voluntary donations and gifts of any kind not prohibited by any Law for the time being in force and to acquire, hold, manage, maintain and dispose of any movable or immovable property, including trust and endowment properties for the purpose of the University or a Constituent College or a Campus, Regional Centre, Study Centre;

(ix) to institute and maintain hostels and to recognize places of residence for students of the University or a Constituent College;



(x) to supervise and control the residence and to regulate the discipline among the students and all categories of employees and to lay down the conditions of service of such employees, including the Code of Conduct for the students and employees;

(xi) to create academic, administrative and support staff and other necessary posts;

(xii) to co-operate and collaborate with other Universities in such a manner and for such purposes as the University may determine from time to time;

(xiii) to organize and conduct refresher courses, orientation courses workshops, seminars and other programmes for teachers, lesson writers, evaluators and other academic staff;

(xiv) to determine standards of admission to the University or a Constituent College, Regional Centres, Study Centres with the approval of Academic Council and to make admission of students of Karnataka not less than the extent provided in this Act;

(xv) to do all such other acts or things whether incidental to the powers aforesaid or not, as may be necessary to further the objects of the University;

(xvi) to institute Degrees, Diplomas, Certificates and other academic distinctions on the basis of examination or any other method of evaluation approved by the Government;

(xvii) to provide for the preparation of instructional materials, including films, cassettes, tapes, video cassettes, CD, VCD and other software and other relevant electronic and print media;

(xviii) to raise, collect, subscribe and borrow money with the approval of the Board of Governors whether on the security of the property of the University, for the purposes of the University;

(xix) to acquire and takeover and run the management of any other educational institutions with the prior approval of the State Government;

(xx) to acquire properties with the prior approval of the Board of Management;

(xxi) to undertake any other activities connected with or incidental to above objectives of the University.

9. University open to all classes, castes, creed, gender or nation.- The University admissions shall be open to all persons irrespective of caste, class, creed, gender or nation. All admissions shall be made on the basis of merit in



the qualifying examinations:

Provided that forty percent of the admissions in all courses of the university shall be reserved for the students of Karnataka State and admissions shall be made through a Common Entrance Examination conducted by the State Government or its agency and seats shall be allotted as per the merit and reservation policy of the State Government from time to time.

Provided further that where there are less than ten seats in any course like Post Graduate, Ph.d and Research they shall be reserved by clubbing such courses together and where there are less than three posts in any course they shall be reserved by rotation.

10. National Accreditation.- The University shall seek accreditation from respective statutory national accreditation bodies soon after its establishment. Further all the courses run by Private Universities shall be as per the regulations of the National Accreditation Bodies.

11. Powers of the sponsoring body.- The sponsoring body shall have the following powers with reference to the University, each of which may be exercised by the Sponsoring Body at its discretion, namely:-

- (i) to appoint or re-appoint or terminate the appointment of the Chancellor;
- (ii) to constitute the first Board of Governors of the University;
- (iii) to nominate the chairperson of the Board of Governors;
- (iv) to nominate three persons as members of the Board of Governors;
- (v) to nominate two persons as members of the Board of Management;
- (vi) to determine the source of funds to be contributed to the University Endowment Fund;
- (vii) to determine the application and spending of monies by the University;
- (viii) to resolve any conflict at the meeting of the Board of Governors in the manner provided for in this Act.

CHAPTER – III **OFFICERS OF THE UNIVERSITY**

12. Officers of the University. - The following shall be the officers of the University, namely:-

- (i) The Visitor;
- (ii) The Pro-visitor;
- (iii) The Chancellor;
- (iv) The Vice-Chancellor;



- (v) The Pro Vice-Chancellor;
- (vi) The Registrar;
- (vii) The Finance Officer; and
- (viii) Such other officers as may be declared by the Statutes to be officers of the University.

13. The Visitor.- (1) His Excellency the Governor of Karnataka shall be the Visitor of the University and the visitor may offer suggestions for the improvement of the functioning of the University.

(2) The Visitor shall preside over the convocation of the University for conferring degrees and diplomas.

(3) The Visitor shall have the following powers, namely:-

- (i) to call for any paper or information relating to the affairs of the University;
- (ii) on the basis of the information received by the Visitor and if he is satisfied that any order, proceedings or decision taken by any authority of the University is not in conformity with the Act, Regulations, or Rules, he may issue such directions as he may deem fit in the interest of the University and the directions so issued shall be complied with by all the concerned.

14. The Pro-Visitor.- (1) The Hon'ble Minister for Higher Education, Government of Karnataka shall be the pro-visitor of the University.-

(2) The pro-visitor shall, when the Visitor is absent, preside at the Convocation of the University for conferring degrees and diplomas.

15. The Chancellor.- (1) The Chancellor shall be appointed by the Sponsoring Body.

(2) The founder trustee of the Sponsoring Body shall be the first Chancellor, who shall hold for life or till he demits office.

(3) The subsequent Chancellor shall be either the then Trustee of the Sponsoring Body or such other person of eminence of national figure in the field of education, science, culture or public life, when such an appointment is being considered, as may be decided by the Sponsoring Body.

(4) The subsequent Chancellor so appointed shall hold the office as determined by the Sponsoring Body.

(5) The Chancellor shall have such powers as may be conferred on him by this Act or the Statutes made there under, which shall include the following powers,



namely:-

- (i) to function as the head of the University;
- (ii) to preside at all convocations of the University in absence of visitor and pro-visitor ;
- (iii) to function as a Chairperson of the Board of Governors of the University ;
- (iv) to appoint or re-appoint or terminate the appointment of the Vice-Chancellor, in accordance with the provisions of this Act and the Statutes;
- (v) to nominate a person as a member of the Nomination Committee as referred to in sub-section (2) of section 16 of this Act;
- (vi) to pre approve the appointment of the Pro Vice-Chancellor, the Dean, the Registrar and the Finance Officer;
- (vii) to nominate two academicians as members on the Board of Governors;
- (viii) to appoint the first Pro Vice-Chancellor and the Finance Officer;
- (ix) to constitute the first Board of Management, the Finance Committee, the Research Council and the Academic Council;
- (x) to pre-approve the Agenda matters in the manner provided for in the Act;
- (xi) to resolve a conflict (excluding conflicts at a meeting of the Board of Governors) in the manner provided in this Act.

(6) In the event of there being a conflict inter-se between the functionary or body and any other functionary or body of the University, then the issue shall be referred to the Chancellor and the decision of the Chancellor in respect of such issue shall be final and binding on the University.

16. The Vice-Chancellor.- (1) The Vice-Chancellor shall be appointed by the Chancellor for a term of three years subject to other terms and conditions as may be laid down by the Statutes from among three persons recommended by the Nomination Committee constituted in accordance with the provisions of sub-section (2). After the term of three years, it is renewable for another term of three years.

Provided that a Vice-chancellor shall continue to hold the office even after expiry of his term till new Vice-chancellor joins. However, in any case this period shall not exceed one year.



(2) The Nomination Committee referred to in sub-section (1) shall consist of the following persons, namely:-

- (i) One person nominated by the Chancellor;
- (ii) Two nominees of the Board of Governors, one of whom shall be nominated as the Convener of the Committee by the Board of Governors.

(3) The Nomination Committee shall, on the basis of merit, recommend three persons suitable to hold the office of the Vice-Chancellor and forward the same to the Chancellor along with a concise statement showing the academic qualifications and other distinctions of each person.

(4) The Vice-Chancellor shall be the Principal Executive and Academic Officer of the University and shall exercise general supervision and control over the affairs of the University and give effect to the decisions of the authorities of the University.

Provided that, where any matter, other than the appointment of a Teacher is of urgent nature requiring immediate action and the same could not be immediately dealt with by any officer or the authority or other body of the University empowered by or under this Act to deal with it, the Vice-Chancellor may take such action as he may deems fit with the prior written approval of the Chancellor.

(5) The Vice-Chancellor shall exercise such other powers and perform such other duties as may be laid down by the Statutes or the Rules.

Provided that, where in the opinion of the Vice-chancellor, any decision of any authority of the university is outside the powers conferred by this Act or Statutes, Regulations or Rules made there under or is likely to be prejudicial to the interests of the university, he shall request the concerned authority to revise its decision within fifteen days from the date of its decision and in case the authority refuses to revise such decision wholly or partly or fails to take any decision within fifteen days, then such matter shall be referred to the Chancellor and his decision thereon shall be final.

(6) The services of the Vice-Chancellor can be terminated by the Chancellor with the approval of the Board of Governors after following the principles of natural justice and after providing an opportunity to present his case including for termination on disciplinary grounds.

(7) The Vice-Chancellor shall preside at the convocation of the University in the absence of the Visitor, Pro-Visitor and the Chancellor.

17. The Pro Vice-Chancellor.- The Vice-Chancellor shall appoint not exceeding three pro-vice Chancellors with the written approval of the Chancellor in



such manner and they shall exercise such powers and perform such duties as may be laid down by the Statutes.

18. Deans of faculties.- Deans of faculties shall be appointed by the Vice-Chancellor with the written approval of the Chancellor in such manner and they shall exercise such powers and perform such duties as may be laid down by the Statutes.

19. The Registrar.- (1) The Registrar shall be appointed by the Chancellor in such manner and on such terms and conditions as may be laid down by the Statutes.

(2) All contracts as defined in statutes shall be entered into and signed by the Registrar on behalf of the University.

(3) The Registrar shall have the power to authenticate records on behalf of the University and shall exercise such other powers and perform such other duties as may be conferred by the statutes or may be required from time to time, by the Chancellor or the Vice-Chancellor.

(4) The Registrar shall be responsible for the due custody of the records and the common seal of the University and shall be bound to place before the Chancellor, the Vice-Chancellor or any other authority, all such information and documents as demanded.

20. The Finance Officer.- The Finance Officer shall be appointed by the Vice-Chancellor with the written approval of the Chancellor in such manner and he shall exercise such powers and perform such duties as may be laid down by the Statutes.

21. Other Officers.- The manner of appointment, terms and conditions of service and powers and duties of the other officers of the University shall be such as may be specified by Statutes.

CHAPTER – IV

AUTHORITIES OF THE UNIVERSITY

22. Authorities of the University.- The following shall be the authorities of the University, namely:-

- (i) The Board of Governors;
- (ii) The Board of Management;
- (iii) The Academic Council;
- (iv) The Research and Innovation Council;
- (v) The Finance Committee; and



(vi) Such other authorities as may be declared by the Statutes to be the authorities of the University.

23. The Board of Governors and its powers.- (1) The Board of Governors shall consist of the following, namely:-

- (i) The Chancellor- Chairperson;
- (ii) The Vice-Chancellor- Member;
- (iii) The Principal Secretary/Secretary to the State Government in the Higher Education or by his nominee not below the rank of Deputy Secretary ;
- (iv) The Principal Secretary/ Secretary to the Government in the Medical Education or by his nominee not below the rank of Deputy Secretary;
- (v) One expert from the field of management, finance or any other specialized, including administration to be nominated by the State Government;
- (vi) Two persons nominated by the Sponsoring Body of whom one shall be woman;
- (vii) The Pro Vice-Chancellor who shall be a non-voting member;
- (viii) One eminent educationist nominee of the university grant commission.

(2) The Registrar shall be non-voting member Secretary of Board of Governors.

(3) The tenure of office of the members of the Board of Governors, appointment of members, other than Government nominees, renewal and removal, etc., shall be such as may be laid down by the Statutes.

(4) All meetings of the Board of Governors shall always be chaired by the Chancellor and in his absence by any one of the nominees of the Chancellor. If Chancellor has not nominated any person to Chair such a meeting, members present in the meeting shall elect the Chairperson for that meeting only from among themselves by a simple majority.

(5) Quorum for all meetings of the Board of Governors shall be three members attending and voting at such meeting.

Provided that the presence of either the Chancellor or one nominee of the Sponsoring Body and in the absence of the Chancellor or one nominee of



Sponsoring Body, the Vice Chancellor, shall always be necessary to form the quorum for any meeting of the Board of Governors.

(6) The Board of Governors shall be the Principal Governing Body of the University and shall have the following powers, namely:-

- (i) to appoint the Statutory Auditors of the University;
- (ii) to lay down policies to be pursued by the University;
- (iii) to review decisions of the other authorities of the University if they are not in conformity with the provisions of this Act, or the Statutes or the Rules;
- (iv) to approve the Budget and Annual Report of the University;
- (v) to make new or additional Statutes or amend or repeal the earlier Statutes and Rules;
- (vi) to take decision about voluntary winding up of the University;
- (vii) to approve proposals for submission to the Government;
- (viii) to nominate three members to the Fee Regulation Committee;
- (ix) to take such decisions and steps as are found desirable for effectively carrying out the objects of the University.

(7) The Board of Governor shall, meet at least three times a year.

(8) The Board of Governors shall meet at such time and place as may be specified by Statute.

24. The Board of Management. - (1) The Board of Management shall consist of the following, namely:-

- (i) The Vice Chancellor;
- (ii) The Pro-Vice Chancellors;
- (iii) The Registrar;
- (iv) Two nominees of the Sponsoring Body;
- (v) Two Deans of the faculties as nominated by the Vice Chancellor.

(2) The Vice Chancellor shall be the Chairperson of the Board of Management and the Registrar shall be the Secretary of the Board of Management.

(3) The Board of management shall be the executive body of the University. The powers and functions of the Board of Management shall be such as may be specified by the statutes.

(4) All meetings of the Boards of Management shall always be chaired by the Vice Chancellor and in the absence of the Vice Chancellor, by the nominee of the Sponsoring Body and where the Sponsoring Body has not nominated any



nominees, then by any other member as elected by the members present in the meeting.

(5) In the event of a conflict of opinion at a meeting of the Board of Management, the issue shall be referred to the Chancellor and the decision of the Chancellor in respect of such issue shall be final and binding on the University.

25. The Academic Council. - (1) The Academic Council shall consist of the following, namely:-

- (i) The Vice-Chancellor - Chairperson
- (ii) The Pro Vice Chancellor - Member
- (iii) The Registrar - Secretary
- (iv) Such other members as may be specified by the Statutes.

(2) The Academic Council shall be the principal academic body of the University and shall, subject to the provisions of this Act, the Statutes, Regulations and the Rules, co-ordinate and exercise general supervision over the academic policies of the University.

26. The Research and Innovation Council. - (1) Research and Innovation Council shall be the Principal Research and Innovation Committee of the University and shall provide the larger holistic vision of the kind of research to be undertaken by the University, including prioritization of the research areas. Research and Innovation Council shall, subject to the provisions of this Act, the Statutes, Regulations and the Rules, co-ordinate and exercise general supervision over the Innovation and Research policies of the University.

(2) The Research and Innovation Council shall consist of the following, namely:-

- (i) The Vice-Chancellor - Chairperson
- (ii) The Pro Vice Chancellor - Member
- (iii) The Dean of Research - Secretary
- (iv) Head of the Department of Innovation - Member
- (v) Deans of all Faculties - Members; and
- (vi) Such other members as may be specified in the Statutes.

27. The Finance Committee. - (1) The Finance Committee shall consist of the following, namely:-

- (i) The Chancellor or his Nominee- - Chairperson
- (ii) The Vice-chancellor - Member
- (iii) The Registrar - Member



- (iv) The Finance Officer - Secretary
- (v) One nominee of the Sponsoring Body - Member; and
- (vi) Such other members as may be specified in the statutes.

(2) The Finance Committee shall be the principal financial body of the University to take care of financial matters and shall, subject to the provisions of this Act, Rules and Statutes co-ordinate and exercise general supervision over the financial matters of the University.

28. Other Authorities.- The constitution, powers and functions of the other authorities of the University shall be such as may be specified by the statutes.

29. Disqualification for membership of an Authority or Body: A person shall be disqualified for being a member of any of the authorities of bodies of the University, if he;

- (a) is of unsound mind and stands so declared by a competent court;
- (b) is an undischarged insolvent;
- (c) has been convicted of any offence involving moral turpitude;
- (d) is conducting or engaging himself in private coaching classes; or
- (e) has been punished for indulging in or promoting unfair practice in the conduct of any examination, in any form, anywhere.
- (f) As and when the Sponsoring Body were to form an opinion in writing that a Member of any of the authorities or bodies is unfit to hold the post.

30. Proceedings not invalidated on account of vacancy.- No act or proceedings of any authority of the University shall be invalid merely by reason of the existence of any vacancy or defect in the constitution of the authority.

31. Provisions pertaining to Agenda Matters.- (1) No Agenda Matter shall be either included in the Agenda for or taken up for discussion and decided in, the meeting of the Board of Governors or the Board of Management or any Committees without obtaining the prior written approval of the Chancellor.

(2) In the event of breach, the Chancellor shall be entitled at all time to immediately take remedial action by reversing all decisions taken by any functionary or body of the University in breach of the provisions of the Act and consequent upon the pursuit of such a remedial action all such actions taken by the functionary or body of the University in breach of the provisions of the Act shall



be deemed to be null and void, ab initio and consequently the status quo ante shall prevail in respect of the matter or decision in breach.

CHAPTER - V

STATUTES AND REGULATIONS

32. Statutes.- Subject to the provisions of this Act, the Statutes may provide for any matter relating to the University and staff, as given below, namely:-

- (i) the procedure for transaction of business of the Authorities of the University and the composition of bodies not specified in this Act;
- (ii) the operation of the permanent statutory endowment fund, University endowment fund, the general fund and the development fund;
- (iii) the terms and conditions of appointment of the Vice-Chancellor, the Registrar and the Finance Officer and their powers and functions;
- (iv) the mode of recruitment and the terms and conditions of service of the other officers, Teachers and employees of the University;
- (v) the procedure for resolving disputes between the University and its officers, Faculty members, employees and students;
- (vi) creation, abolition or restructuring of departments and faculties;
- (vii) the manner of co-operation with other Universities or institutions of higher learning;
- (viii) the procedure for conferment of honorary degrees;
- (ix) provisions regarding grant of free ships and scholarships;
- (x) policies in respect of seats in different courses of studies and the procedure of admission of students to such courses;
- (xi) policy relating to the fee chargeable from students for various courses of studies;
- (xii) institution of fellowships, scholarships, studentships, free ships, medals and prizes;
- (xiii) any other matters which may be decided by the Board of Governors or required to be provided by statutes under this Act.

33. Statutes how made.- (1) The first statutes framed by the Board of Management shall be submitted to the Board of Governors for its approval.

(2) The Board of Governors shall consider the First Statutes, submitted by the Board of Management and shall give its approval thereon with such modifications, if any, as it may deem necessary.



(3) The University shall publish the First Statutes, as approved by the Board of Governors in the University Notification, and thereafter, the First Statutes shall come into force from the date of its publication.

34. Power to amend the Statutes.- The Board of Governors may, make new or additional Statutes or amend or repeal the Statutes.

35. Regulations.- Subject to the provisions of this Act, the regulations may provide for all or any of the following matters, namely:-

- (i) admission of students to the University and their enrolment and continuance as such;
- (ii) the courses of study to be laid down for all degrees and other academic distinctions of the University;
- (iii) the award of degrees and other academic distinctions;
- (iv) the conditions of the award of fellowships, scholarships, studentships, medals and prizes;
- (v) the conduct of examinations and the conditions and mode of appointment and duties of examining bodies, examiners invigilators, tabulators and moderators;
- (vi) the fee to be charged for admission to the examinations, degrees and other academic distinctions of the University;
- (vii) the conditions of residence of the students at the University or a Constituent College;
- (viii) maintenance of discipline among the students of the University or a Constituent College;
- (ix) all other matters as may be provided in the Statutes under the Act.

36. Regulations how made.- The Regulations shall be made by the Academic Council and approved by Board of Management.

37. Power to amend Regulations.- The Academic Council may, with the approval of the Board of Management, make new or additional regulations or amend or repeal the regulations.

38. Fee Regulation Committee.- (1) The fee of the university seats reserved for Karnataka Students under section 9 shall be regulated by the Fee Regulation Committee constituted by the Government which shall be headed by a retired Supreme Court or High Court Judge and consists of Chancellor, Vice-Chancellor of the University, Principal Secretary or Secretary to Government incharge of Higher Education or by his nominee not below the rank of Deputy Secretary, Principal



Secretary or Secretary to Government incharge of Medical Education or by his nominee not below the rank of Deputy Secretary, two Academicians nominated by the Board of Governors of whom one shall be woman. A Chartered Accountant of repute shall be co-opted for this purpose in the Committee.

(2) The Committee shall look after the compliance of the university in its admissions of collection of fee.

CHAPTER – VI

MISCELLANEOUS

39. Conditions of service of employees.- (1) Every employee shall be appointed under a written contract subject to such terms and conditions as may be specified by statutes and regulations or prescribed if any by rules which shall be kept in the University and a copy of which shall be furnished to the employee concerned.

(2) Disciplinary action against the employees shall be governed by the procedure specified in the Statutes.

(3) Any dispute arising out of the contract between the University and an employee shall, be resolved in the manner provided for in the written contract and in accordance with the Statutes.

40. Right to appeal.- In case of disciplinary actions by the University against its employee or student, the aggrieved employee or students shall have a right to appeal as specified by the statutes.

41. Provident or pension fund.- The University shall constitute for the benefit of its employees such provident or pension fund and provide such insurance scheme as it may deem fit in such manner and subject to such conditions as may be specified by the statutes and the laws in force.

42. Disputes as to constitution of University authorities and bodies.- If any question arises as to whether any person has been duly elected or appointed as, or is entitled to be a member of any authority or other body of the University, the matter shall be referred to the Chancellor whose decision thereon shall be final.

43. Constitution of Committees.- Any authority of the University mentioned in section 22, shall be empowered to constitute a committee of such authority, consisting of such members of such authority and having such powers as the authority may deem fit.

44. Filling of casual vacancies.- Any casual vacancy among the members, other than ex-officio members of any Authority or body of the University shall



be filled in the same manner in which the member whose vacancy is to be filled up, was chosen, and the person filling the vacancy shall be a member of such authority or body for the residual term for which the person in whose place he would have been a member.

45. Protection of action taken in good faith.- No suit or other legal proceedings shall lie against any officer or other employee of the University for anything, which is done in good faith or intended to be done in pursuance of the provisions of this Act, the Statutes or the Rules.

46. Transitional provisions.- Notwithstanding anything contained in any other provisions of this Act and the Statutes,-

(i) the first Vice-Chancellor and Pro-Vice-Chancellor, if any shall be appointed by the Chancellor;

(ii) the first Registrar and the first Finance Officer shall be appointed by the Chancellor; and

(iii) the first Board of Management, the first Finance Committee, the first Innovation and Research Council and the first Academic Council shall be constituted by the Chancellor.

47. Permanent Statutory Endowment Fund.- (1) The University shall establish a Permanent Statutory Endowment Fund of at least rupees twenty five crores, out of which at least fifteen crores shall be in cash and remaining in the form of Bank Guarantee, which may be increased suo moto but shall not be decreased.

Provided that, in case of a University outside the Bangalore or Bangalore Rural District at least ten crores must be in form of cash and the remaining five crores shall be in form of Bank Guarantee.

(2) The University shall have power to invest the permanent Statutory Endowment Fund in such manner as may be prescribed.

(3) The University may transfer any amount from the General Fund or the Development Fund to the permanent Statutory Endowment Fund. Excepting in the event of dissolution of the University, in no other circumstances can any monies be transferred from permanent Statutory Endowment Fund for other purposes.

(4) Seventy five percent of the incomes received from permanent Statutory Endowment Fund shall be used for the purpose of development or general work of



the University. The remaining twenty five percent shall be reinvested in the permanent Statutory Endowment Fund.

48. University Endowment Fund.- (1) The University shall establish a Permanent Statutory Endowment Fund of at least rupees twenty five crores out of which at least fifteen crores shall be in cash and remaining in the form of Bank guarantee which may be increased suo moto but shall not be decreased.

(2) The University shall have the power to invest the University Endowment Fund in a manner as may be specified by the Statutes.

(3) The University Endowment Fund is a self-imposed fund that the University desires to maintain voluntarily and invest it responsibly to protect itself from financial challenges that may arise on account of pursuing social objectives and/or unforeseen circumstance.

(4) The University may transfer any amount from the General Fund or the development fund to the University Endowment Fund. Excepting in the event of dissolution of the University, in no other circumstances can any monies be transferred from the University Endowment Fund for other purposes.

(5) Eighty percent of the incomes received from the University Endowment Fund shall be used for the purposes of development or general work of the University. The remaining twenty percent shall be reinvested into the University Endowment Fund.

49. General Fund. - (1) The University shall establish a General Fund to which the following amount shall be credited, namely:-

- (i) all fees which may be charged by the University;
- (ii) all sums received from any other source not prohibited by any law for the time being in force;
- (iii) all contributions made to the University;
- (iv) all contributions/donations made in this behalf by any other person or body which are not prohibited by any law for the time being in force.

(2) The funds credited to the General Fund shall be applied to meet all the recurring expenditure of the University.

50. Development fund.- (1) The University shall establish a Development Fund to which the following funds shall be credited, namely:-

- (i) development fees which may be charged from students;



- (ii) all sums received from any other source for the purposes of the development of the University;
- (iii) all contributions made by the University;
- (iv) all contributions/donations made in this behalf by any other person or body which are not prohibited by any law for the time being in force; and
- (v) all incomes received from the Permanent Statutory Endowment Fund.

(2) The funds credited to the Development Fund from time to time shall be utilized for the development of the University.

51. Maintenance of funds.- The funds established under sections 47, 48, 49 and 50 shall, subject to general supervision and control of the Board of Governors, be regulated and maintained in such manner as may be prescribed.

52. Annual Report.- (1) The annual report of the University shall be prepared under the direction of the Board of Management and shall be submitted to the Board of Governors for its approval.

(2) The Board of Governors shall consider the annual report in its meeting and may approve the same with or without modification.

(3) A copy of the annual report duly approved by the Board of Governors shall be sent to the Visitor and the State Government before 31st December following close of the financial year in 31st March of each year.

53. Account and audit.- (1) The annual accounts and balance sheet of the University shall be prepared under the direction of the Board of Management and all funds accruing to or received by the University from all source and all amount disbursed or paid shall be entered in the account maintained by the University.

(2) The annual accounts of the University shall be audited by an auditor, who is a member of the Institute of Chartered Accountants of India, every year.

(3) A copy of the annual accounts and the balance sheet together with the audit report shall be submitted to the Board of Governors before 30th November following close of the financial year in 31 March of each year.

(4) The annual accounts, the balance sheet and the audit report shall be considered by the Board of Governors at its meeting and the Board of Governors shall forward the same to the visitor and the Government along with its observation thereon on or before 31st December of each year.



54. Mode of proof of University record.- A copy of any receipt, application, notice, order, proceeding or resolution of any authority or committee of the University or other documents in possession of the University or any entry in any register duly maintained by the University, if certified by the Registrar, shall be received as prima facie evidence of such receipt, application, notice, order, proceeding, resolution or document or the existence of entry in the register and shall be admitted as evidence of the matters and transaction therein recorded where the original thereof would, if produced, have been admissible in evidence.

55. Power of State Government to issue directions.- The State Government may give such directions to the University as in its opinion are necessary or expedient for carrying out the purposes of this Act or to give effect to any of the provisions contained therein or of any rules or orders made there under and the Board of Governor or the Board of management, as the case may be, of the University shall comply with every such direction.

56. Penalties.- (1) Whoever contravenes the provisions of this Act or the rules made thereunder or any examination matters or in matters relating to award of degrees or in giving marks cards shall on conviction be punishable with fine of rupees fifty thousand which may extend to ten lakhs rupees or with an imprisonment for a term of six months which may extend to two years or with both.

Provided that, where the University is also involved the permission letter granted under this Act to commence the University shall be withdrawn.

(2) A penalty under this section may be imposed without prejudice to the penalty specified in any other Act.

57. Power to enter and inspect.- Any officer not below the rank of Group 'A' officer authorised by the State Government in this behalf, shall, subject to such conditions as may be specified therein under the Karnataka Educational Institutions (Prohibition of Capitation Fee) Act, 1984 (Karnataka Act 37 of 1984) shall be deemed to be the Officer authorized to exercise the same powers and discharge the same functions as provided under section 9 of that Act for the purposes of this Act.

58. Power to give direction for dissolution of the University.- (1) If the University proposes dissolution in accordance with the law governing its constitution or incorporation, it shall give at least six months prior notice in writing to the Government.



(2) The Karnataka State Higher Education Council shall conduct periodical Inspection of University regarding:-

- (i) Standard of Instructions for grant of degree;
- (ii) Quality of Education;
- (iii) Avoidance of commercialisation of Higher Education;
- (iv) contravention of the provisions of the Act if any;

- and send report to the Government.

(3) On identification of mismanagement, maladministration and indiscipline, the Government shall issue directions to the management of the University to set right the administration. If the direction is not followed within such time as may be prescribed, the right to take decision for winding up of the University or any course thereof shall vest with the Government.

(4) The manner of winding up of the University or any course thereof shall be such as may be prescribed by the Government in this behalf.

Provided that no such action shall be initiated without affording a reasonable opportunity to show cause to the University

(5) On receipt of the notice referred to in sub-section (1), the Government shall, in consultation with the relevant Regulatory Authority make such arrangements for administration of the University from the proposed date of dissolution of the University or winding up of the course and until the last batch of students in regular courses of studies of the University complete their courses of studies in such manner as may be specified by the Statues.

59. Expenditure of the University during dissolution.-(1) The expenditure of administration of the University during taking over period of its management under sub-section (5) of section 58 shall be met out of the Permanent Statutory Endowment Fund, the General Fund or the Development Fund in such manner as may be prescribed.

(2) If the fund referred to in section 47, 48, 49 and 50 are not sufficient to meet the expenditure of the University during the taking over period of its management, such expenditure may be met by disposing of the properties or asset of the University, by the Government.

(3) Where the dissolution of the University is due to mismanagement or maladministration, the Government is at liberty to identify the persons responsible for such mismanagement or maladministration and to impose penalty as it deems fit.



60. Removal of difficulties.- (1) If any difficulty arises in giving effect to the provisions of this Act, the State Government may, by a notification or by order, make such provisions, which are not inconsistent with the provisions of this Act, as appear to it to be necessary or expedient, for removing the difficulty:

Provided that, no notification or order under this section shall be made after the expiry of a period of five years from the date of commencement of this Act.

(2) Every Order made under sub-section (1), shall, as soon as may be after it is made, be laid before the State Legislature.

61. Power to make rules by the State Government.- (1) The State Government may make rules, by notification, to carryout the purposes of this Act.

(2) Every rule made under this Act shall be laid as soon as may be after it is made before each House of the State Legislature while it is in session for a total period of thirty days which may be comprised in one session or in two or more successive sessions, and if, before the expiry of the session immediately following the session or the successive sessions aforesaid, both Houses agree in making any modification in the rule or both Houses agree that the rule should not be made, the rule shall thereafter have effect only in such modified form or be of no effect, as the case may be, so however, that any such modification or annulment shall be without prejudice to the validity of anything previously done under that rule.

The above translation of ದಯಾನಂದ ಸಾಗರ ವಿಶ್ವವಿದ್ಯಾಲಯ ಅಧಿನಿಯಮ 2012 (2013ರ ಕರ್ನಾಟಕ ಅಧಿನಿಯಮ ಸಂಖ್ಯೆ:20) be published in the Official Gazette under clause (3) of Article 348 of the Constitution of India.

H.R.BHARDWAJ

GOVERNOR OF KARNATAKA

By Order and in the name of the
Governor of Karnataka

K. DWARAKANATH BABU

Secretary to Government (I/c),
Department of Parliamentary
Affairs and Legislation.



ಕರ್ನಾಟಕ ಸರ್ಕಾರ

ಸಂಖ್ಯೆ: ಇಡಿ 95 ಯುಆರ್‌ಸಿ 2014

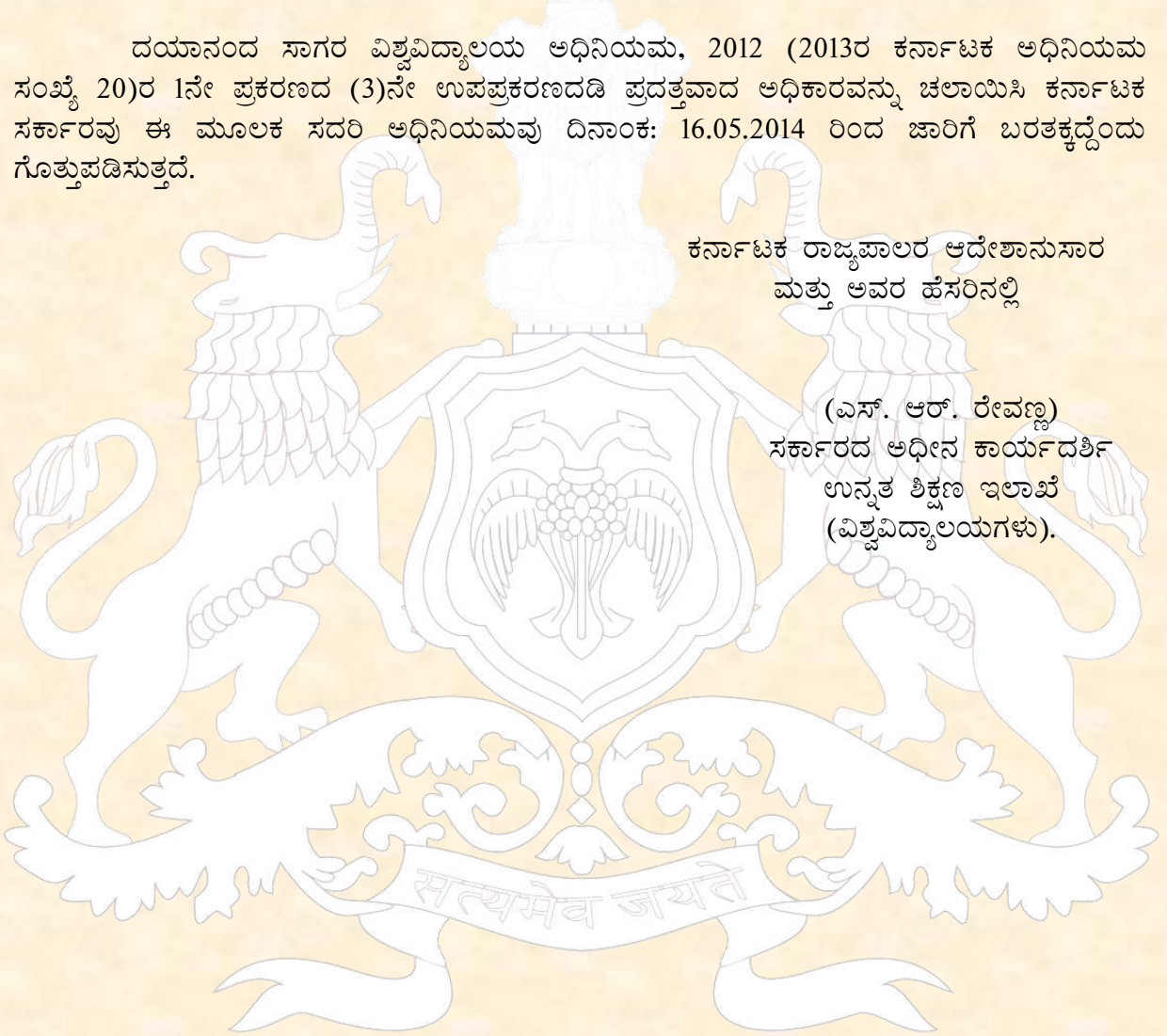
ಕರ್ನಾಟಕ ಸರ್ಕಾರದ ಸಚಿವಾಲಯ,
ಬಹುಮಹಡಿ ಕಟ್ಟಡ,
ಬೆಂಗಳೂರು, ದಿನಾಂಕ: 16.05.2014.

ಅಧಿಸೂಚನೆ

ದಯಾನಂದ ಸಾಗರ ವಿಶ್ವವಿದ್ಯಾಲಯ ಅಧಿನಿಯಮ, 2012 (2013ರ ಕರ್ನಾಟಕ ಅಧಿನಿಯಮ ಸಂಖ್ಯೆ 20)ರ 1ನೇ ಪ್ರಕರಣದ (3)ನೇ ಉಪಪ್ರಕರಣದಡಿ ಪ್ರದತ್ತವಾದ ಅಧಿಕಾರವನ್ನು ಚಲಾಯಿಸಿ ಕರ್ನಾಟಕ ಸರ್ಕಾರವು ಈ ಮೂಲಕ ಸದರಿ ಅಧಿನಿಯಮವು ದಿನಾಂಕ: 16.05.2014 ರಿಂದ ಜಾರಿಗೆ ಬರತಕ್ಕದ್ದೆಂದು ಗೊತ್ತುಪಡಿಸುತ್ತದೆ.

ಕರ್ನಾಟಕ ರಾಜ್ಯಪಾಲರ ಆದೇಶಾನುಸಾರ
ಮತ್ತು ಅವರ ಹೆಸರಿನಲ್ಲಿ

(ಎಸ್. ಆರ್. ರೇವಣ್ಣ)
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ಉನ್ನತ ಶಿಕ್ಷಣ ಇಲಾಖೆ
(ವಿಶ್ವವಿದ್ಯಾಲಯಗಳು).





(b) for any specific research or programmes receiving support from the State Government and

(c) provided to or the benefit of the similar Universities in the State whether subject to a change in State Policy or otherwise;

Provided further that the university may receive any financial support from any other source.

6. Power to establish constituent College, additional campuses, Regional Centres or Study Centres:- The University may have Constituent Colleges, Regional Centres, additional campuses and Study Centres at such places in the State as it deems fit after the completion of five years after its establishment with prior approval of the State Government subject to norms of UGC and other National Accreditation bodies.

7. Objects of the University:-The University shall employ a broad range of strategies to achieve its vision and objectives.-

(i) to support, promote and undertake advancement of and innovation in University education leading up to and including post graduate, doctoral and post doctoral courses in the Technical, Health, Management, Life sciences and allied sectors and make provisions for research, advancement and dissemination of knowledge including consultancy in these fields;

(ii) to collaborate with any other universities, research institutions, non-profit organizations, industry associations, professional associations or other organizations, to conceptualize, design, develop and offer specific educational and research programmes, training programmes and exchange programmes for students, faculty members and others;

(iii) to undertake collaborative research and advocacy with any organizations with prior approval of the State Government;

(iv) to disseminate and advance knowledge by providing instructional and research facilities in such branches of learning as it may deem fit and in particular, to make special provisions for integrated courses in Technical, Health, Management, Life sciences and other such Higher Educational Programmes of the University and to make appropriate measures for promoting interdisciplinary studies and research;

(v) to develop human resources to meet the demands of high end technical and professional industries with research on future sustainable technologies catering to engineering solutions and support technology business and technology incubation;

(vi) to provide innovative system of University level education, flexible and open with regard to methods and places of learning, combination of courses eligibility for enrolment, age of entry, conduct of examinations and operation of programmes with a view to



promoting access and equity in higher learning besides encouraging excellence in new fields of knowledge and placing special emphasis on both academic as well as application oriented learning;

(vii) to develop resource centres to contribute to quality education with prior approval of State Government;

(viii) to establish Campuses, Regional centres, study centres and constituent Colleges at various locations in Karnataka and to contribute and develop an understanding of educational change in technical, professional, general education and social and human development with prior approval of Government;

(ix) to institute degrees, diplomas, certificates and other academic distinctions like award of credits on the basis of successful completion of academic work evaluated through multiple modern methods of assessment;

(x) to disseminate knowledge and develop a public debate on issues of education and allied development fields through seminars, conferences, executive education programmes, community development programmes, publications and training programmes and events;

(xi) to undertake programmes for development and training of faculty and researchers of the University in partnership with any other university of quality with prior approval of the State Government;

(xii) to undertake necessary or expedient action to pursue and promote the objectives of the University;

(xiii) to pursue any objectives as may be approved by the Government for the enhancement of education and other development sectors in India.

8. Powers of the University:-The University shall have the following powers, namely:-

(i) to establish and maintain such Campuses, Regional Centres and Study Centres in Karnataka as may be determined by the University from time to time in the manner laid down by the Statutes with prior approval of the Government and as per UGC norms;

(ii) to carry out all such other activities as may be necessary or feasible in furtherance of the object of the University;

(iii) to confer degrees or other academic distinctions in the manner and under conditions laid down in the Statutes;

(iv) to institute and award fellowships, scholarships and prizes, awards, medals etc., in accordance with the Statutes;

- (s) "Learner Support Services" means and includes such services as are provided by a Higher Educational Institution in order to facilitate the acquisition of teaching-learning experiences by the learner to the level prescribed by or on behalf of the Commission in respect of a programme of study under Open and Distance Learning mode and/or Online mode;
- (t) "MOOCs" shall have the same meaning as assigned to it under sub-regulation 3.6 of regulation 3 of UGC (Credit Framework for Online learning courses through SWAYAM) Regulations, 2016;
- (u) "Online Mode" means a mode of providing flexible learning opportunities by overcoming separation of teacher and learner using internet, e-Learning Materials and full-fledged programme delivery through the internet using technology assisted mechanism and resources;
- (v) "Open and Distance Learning Mode" means a mode of providing flexible learning opportunities by overcoming separation of teacher and learner using a variety of media, including print, electronic, online and occasional interactive face-to-face meetings with the learners or Learner Support Services to deliver teaching-learning experiences, including practical or work experiences;
- (w) "Open University" means a Higher Educational Institution which imparts education only through Open and Distance learning mode and/or Online mode using variety of media including print, electronic, online, information and communication technology educational aids including Open Educational Resources (OERs) or Massive Open Online Courses (MOOCs) etc. and is not having any provision for offering higher education in conventional mode in its Act or Memorandum of Association or other statutory documents governing the Higher Educational Institution;
- (x) "Post Graduate Diploma" means a programme with minimum duration of two years, minimum entry level qualification as graduation, minimum 80 credits and nomenclature as recognised by the Commission and regulatory authority or statutory council, as applicable;
- (y) "Proctored Examination" means the examination conducted under the supervision of approved person or technology enabled proctoring which ensures the identity of the test taker and the integrity of the test taking environment, either in pen-paper mode or in computer based testing mode or in full-fledged Online mode; as permissible in Open and Distance Learning mode and Online mode under these regulations;
- (z) "Prohibited programmes" means such programmes which shall not be permitted to be offered in Open and Distance Learning Mode and Online Mode in Higher Education, as detailed under:
 - (a) The programmes in the disciplines (including their allied domains) of Engineering, Medical, Physiotherapy, Occupational Therapy and other Para-Medical disciplines, Pharmacy, Nursing, Dental, Architecture, Law, Agriculture, Horticulture, Hotel Management, Catering Technology, Culinary Sciences, Aircraft Maintenance, Visual Arts and Sports;
 - (b) The research based programmes such as M.Phil and Ph.D;
 - (c) Such other Programmes not permitted to be offered through Open and Distance Learning mode and/or Online mode by any concerned statutory or regulatory body or council:

Provided that, if the concerned statutory or regulatory body or council permits any of the prohibited programmes, as mentioned above, under its domain, in Open and Distance Learning mode and/or Online mode, the same may be considered by the Commission, and the decision so taken shall be notified by an Order.



SRINIVAS UNIVERSITY

(PRIVATE UNIVERSITY ESTABLISHED BY KARNATAKA STATE ACT NO.42 OF 2013)

City Office: GHS Road, MANGALURU-575001, Karnataka State, INDIA

Phone No.: 0824-2425966, 2444891, 2477866 Fax: 0824-2442766

Email: info@srinivasuniversity.edu.in

website: www.srinivasuniversity.edu.in



SRINIVAS UNIVERSITY

CENTRE FOR DISTANCE

&

ONLINE EDUCATION

PROGRAMME PROJECT REPORT (PPR)

OL BCA


Registrar
REGISTRAR
SRINIVAS UNIVERSITY
MANGALORE





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ABOUT “SRINIVAS UNIVERSITY”

Srinivas University, Mangaluru, is a Private Research and Skill-focused University established in 2013 under the Karnataka State Act and is part of the A. Shama Rao Foundation, founded in 1988 by eminent Chartered Accountant A. Raghavendra Rao. As the flagship of the Srinivas Group of Institutions, the University builds on a legacy of 37 years of academic excellence.

Accredited with an ‘A’ Grade by NAAC, the University today comprises 12 institutes offering 150+ undergraduate, postgraduate, and research programs in diverse domains including Medical, Engineering, Management, Aviation, Allied Health, Dental, Nursing, Hotel Management, Physiotherapy, Social Work, Education, and more.

With a strong focus on industry-aligned curriculum, innovation in examinations, skill-based education, and global collaborations, Srinivas University is committed to preparing future-ready professionals and leaders who can thrive in a rapidly changing world.

Institutes under Srinivas University

- [Institute of Allied Health Sciences](#)
- [Institute of Aviation Studies](#)
- [Institute of Computer & Information Sciences](#)
- [Institute of Education](#)
- [Institute of Engineering & Technology](#)
- [Institute of Hotel Management & Tourism](#)
- [Institute of Management & Commerce](#)
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- [Institute of Physiotherapy](#)
- [Institute of Port, Shipping and Logistics Management](#)
- [Yoga Sanskrit Studies & Research Centre](#)





SRINIVAS UNIVERSITY

(PRIVATE UNIVERSITY ESTABLISHED BY KARNATAKA STATE ACT NO.42 OF 2013)

City Office: GHS Road, MANGALURU-575001, Karnataka State, INDIA

Phone No.: 0824-2425966, 2444891, 2477866 Fax: 0824-2442766

Email: info@srinivasuniversity.edu.in

website: www.srinivasuniversity.edu.in



VISION

To be a trendsetting university producing leaders with competence, conscience, and compassion who create a just, sustainable world for future generations.

MISSION

To provide a transformative learning environment that fosters leadership, creativity, and intellectual growth through uncompromising academic and ethical standards.

Objectives

With an aim to be among one of the top Universities in the world, SRINIVAS UNIVERSITY has set itself the following objectives:

- Promote advanced intellectual abilities and research.
- Establish state-of-the-art educational and training facilities.
- Provide consultancy to industry and public organizations.
- Impart value-based education through national and international collaboration.
- Emphasize multi-disciplinary and trans-disciplinary education.

Core Values

Core Values to be embedded in all stakeholders

- Teamwork and unity among stakeholders.
- Respect for human dignity and harmony.
- Responsibility and accountability.
- Ethics and professional integrity.
- Courtesy and inclusiveness.


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1. PREAMBLE

PRELIMINARY DEFINITIONS AND NOMENCLATURE

In these Regulations, unless the context otherwise requires

- i. **“Programme”** means Degree Programme offered under Online Learning (OL).
- ii. **“Course”** means a Theory/Project work and any other subject that is normally studied in a semester.
- iii. **“Institution”** means SRINIVAS UNIVERSITY
- iv. **“Academic Council”** means the Academic Council, which is the apex body on all academic matters of SRINIVAS UNIVERSITY
- v. **“Controller of Examinations”** means the Controller of Examinations of SRINIVAS UNIVERSITY who is responsible for the conduct of examinations and declaration of results.
- i. **“Director”** means the Director of the Centre for Distance and Online Education (CDOE), CDOE is a part of SRINIVAS UNIVERSITY
- ii. **“Online Learning”** means a mode of providing flexible learning opportunities by overcoming the separation of teacher and learner using the internet, eLearning materials and full-fledged programme delivery through the internet using technology-assisted mechanism and resources.
- iii. **“Self-Learning e-Module (SLM) for Online mode”** means a modular unit of course material in e-learning form which is inter alia of course material in e-learning form which is inter alia self-explanatory, self-contained, self-directed at the learner, and amenable to self-evaluation, and enables the learner to acquire the prescribed level of learning in a course of study and includes contents in the form of a combination of the following e-Learning content, namely
 - e-Text Materials
 - Audio Podcasts
 - Video Lectures
 - Audio-Visual interactive material
 - Virtual Classroom Zoom/Team/WebEx/Google Class Room sessions
 - Virtual Simulation labs and
 - Self-Assessment Quizzes or Tests


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3. CONTENTS OF PROGRAMME PROJECT REPORT (PPR)

I. Programme's Mission and Objectives:

Mission: The mission of the BCA program at **Srinivas University** is to provide a strong foundation in computer science and applications. The program aims to equip graduates with the technical skills and professional ethics needed for careers in software development, database management, and network administration while fostering creativity and innovation.

Key areas of focus include:

- Enhancing analytical and problem-solving skills.
- Training students for the global IT industry and higher education.
- Promoting technical expertise in software engineering and system design.

Course Objectives

The program is designed to achieve the following core goals:

- **Develop core skills:** Enhance logical reasoning, analytical, problem-solving, and communication skills through practical application.
- **Build technical expertise:** Provide a strong foundation in programming, software development, and system analysis and design.
- **Foster innovation:** Encourage creativity, innovative thinking, and the development of solutions for real-world problems.
- **Prepare for careers:** Train students for employment in various IT roles, such as software engineers, system analysts, and web developers.
- **Promote higher education:** Prepare students for advanced studies in Computer Applications (BCA), Business Administration (BBA), or other specialized fields.
- **Instill professional values:** Emphasize professional ethics, teamwork, and continuous learning throughout their careers.
- **Global Competency:** Enable students to work on global projects and understand the needs of the international IT job market.

Program Educational Objectives (PEOs)

Our Graduates shall:

- **PEO 1:** Possess strong foundations in the fundamentals of computer science and applications for employability and/or post-graduate studies.
- **PEO 2:** Be empowered with competencies in creative thinking, real-time problem solving, interpersonal communication, and managerial skills.
- **PEO 3:** Facilitate an overall understanding of technological development alongside legal and ethical issues.

Program Outcomes (POs):

On successful completion of the four-year BCA programme, graduates will be able to develop-

1. **Computing Knowledge:** Apply knowledge of mathematics, computing fundamentals, and computer science concepts to solve real-world problems.
2. **Problem Analysis:** Identify, analyze, and define computing problems using appropriate principles and methodologies.
3. **Design & Development of Solutions:** Design, implement, and evaluate computer-based solutions that meet specified requirements.
4. **Programming Proficiency:** Develop efficient programs using modern programming languages, tools, and techniques.
5. **Use of Modern Tools:** Apply current software tools, platforms, and technologies for application development and problem solving.
6. **Data Management & Analysis:** Understand and apply database concepts, data structures, and data analysis techniques effectively.
7. **System & Software Development:** Demonstrate understanding of software engineering principles, system design, and development life cycles.
8. **Professional Ethics:** Apply ethical principles, legal responsibilities, and professional standards in computing practices.
9. **Communication Skills:** Communicate effectively with technical and non-technical audiences through reports, documentation, and presentations.
10. **Individual & Team Work:** Function effectively as an individual and as a member or leader in diverse, multidisciplinary teams.
11. **Life-long Learning:** Recognize the need for continuous learning and adapt to emerging technologies and industry trends.
12. **Entrepreneurship & Employability:** Apply computing knowledge to enhance employability, entrepreneurship, and innovation in IT-enabled services.



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Program Specific Outcomes (PSOs):

These focus on the specialized technical capabilities of the BCA graduate:

- **PSO1 – Application Development:**
Develop computer applications using appropriate programming languages, frameworks, and development tools.
- **PSO2 – Database & Data Handling:**
Design, implement, and manage databases using modern database management systems and data processing techniques.
- **PSO3 – Software Engineering Practices:**
Apply software engineering principles, testing strategies, and documentation standards in application development.
- **PSO4 – Web & Emerging Technologies:**
Build web-based solutions using front-end and back-end technologies and adapt to emerging computing trends.
- **PSO5 – Industry Readiness & Professional Skills:**
Demonstrate professional, ethical, and problem-solving skills required for employment, higher studies, or entrepreneurship in the IT sector.

Srinivas University aims to achieve academic excellence by providing multi-faceted education to the students and encouraging them to reach the pinnacle of success. The University has designed a system that would provide rigorous academic training and necessary skills to enable them to excel in their careers

Srinivas University is committed to providing a conducive learning environment that ensures comprehensive development of students and makes them competent, confident, and good citizens. The objective of the Bachelor of Computer application (BCA) Programme of Srinivas University is to provide high-quality management education to students through advancement of knowledge in all business administration functions and development of professionalism, confidence and creative ability in student managers


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III. Relevance of the program with HEI's mission and goals:

The relevance of an “BCA” program in Higher Education Institution's (HEI) mission and goals can be multifaceted, aligning with several key aspects:

- **Specialization in a Niche Field:** If the HEI focuses on providing specialized education in specific industries or fields, offering an BCA course complements this focus. It demonstrates the institution's commitment to catering to industry-specific demands and producing skilled professionals in a niche sector.
- **Industry Collaboration and Partnerships:** Industry collaboration and partnerships play a vital role in achieving the mission and goals of a Higher Education Institution (HEI) offering a Bachelor of Computer Applications (BCA) program. These collaborations help bridge the gap between academic learning and industry requirements by exposing students to real-world technologies, tools, and professional practices. Through partnerships with IT companies, software firms, and technology organizations, institutions can provide students with opportunities for internships, industrial visits, guest lectures, workshops, and live projects.
- **Career-Oriented Education:** Career-oriented education is an essential part of the mission of a Higher Education Institution (HEI) offering a Bachelor of Computer Applications (BCA) program. The program aims to equip students with practical knowledge and technical skills in areas such as programming, database management, web development, and software applications. By focusing on skill-based learning, industry-relevant curriculum, and hands-on training, the institution prepares students for various career opportunities in the IT sector. Through internships, projects, workshops, and placement support, the BCA program helps students develop professional competencies and become job-ready graduates capable of meeting the demands of the modern technology-driven world.
- **Global Perspective and Internationalization:** The BCA program in a Higher Education Institution (HEI) aims to provide students with a global perspective by incorporating international standards in computer education and emerging technologies. The program encourages awareness of global IT trends, cross-cultural collaboration, and the use of internationally recognized tools and practices in software development. Through online resources, global certifications, virtual collaborations, and exposure to international case studies, students gain knowledge that prepares them to work in a global technology environment. This approach helps develop adaptable professionals who can contribute effectively in the international IT industry and diverse workplace settings.


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- **Contribution to Economic Development:** The BCA program in a Higher Education Institution (HEI) contributes to economic development by preparing skilled professionals for the growing information technology sector. By providing education in programming, software development, data management, and digital technologies, the program equips students with the competencies required in modern industries. Graduates of the BCA program support the development of IT services, startups, and digital solutions that enhance productivity and innovation in various sectors. Through entrepreneurship, employment generation, and technological advancement, the program plays an important role in strengthening the digital economy and supporting national development.
- **Sustainability and Ethical Practices:** The BCA program in a Higher Education Institution (HEI) promotes sustainability and ethical practices as part of its mission to develop responsible technology professionals. The program encourages students to use technology in an environmentally and socially responsible manner while emphasizing ethical values such as honesty, data privacy, intellectual property respect, and professional integrity. Through coursework, projects, and discussions on ethical computing and sustainable digital solutions, students are guided to develop applications that support sustainable development and benefit society. This approach helps create IT professionals who are not only technically skilled but also socially responsible and ethically aware.

VISION:

To continuously upgrade the quality of our curriculum and pedagogy in order to achieve the status of one of the top-ranking institutions in Online Education in the world.

MISSION:

- To provide strong foundational knowledge in computer applications, programming, and emerging technologies to prepare students for successful careers in the IT industry.
- To develop problem-solving, analytical, and logical thinking skills through practical and project-based learning in computing.


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- To equip students with modern software development skills and tools required for building innovative and efficient applications.
- To encourage research, innovation, and lifelong learning in the field of computer science and information technology.
- To nurture ethical values, professionalism, and teamwork necessary for responsible participation in the global technology community.
- To bridge the gap between academic knowledge and industry requirements through internships, industry interaction, and real-world projects.

IV. Nature of prospective target group of learners:

The prospective target group for an BCA through Online mode typically includes Individuals already employed in any sectors seeking career advancement without interrupting their jobs. Online mode allows them to balance work commitments with studies. Recent graduates aspiring to become managers and administrators across industries and working professionals who are aiming for their career development.

- Those from diverse geographical locations interested in pursuing a BCA program in from a reputable institution without relocating, offering flexibility in learning.
- Professionals from other industries aspiring to transition, leveraging an BCA program to gain industry-specific knowledge and skills.
- Individuals managing or planning to start their own businesses who seek a comprehensive understanding of the industry's nuances and managerial strategies.


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- The Online mode appeals to diverse learners due to its flexibility, allowing students to study at their own pace and convenience. It accommodates various learner profiles, providing access to quality education regardless of geographical constraints or work commitments.

V. Appropriateness of programme to be conducted in Online mode to acquire specific skills and competence:

An “BCA” conducted through Online mode can be highly appropriate for acquiring specific skills and competence due to several reasons:

- **Flexibility and Accessibility:** The online BCA program provides flexibility and accessibility, enabling students to develop essential computer application skills and competencies at their own pace and convenience. Through digital learning platforms, virtual labs, recorded lectures, and interactive sessions, students gain knowledge in programming, database management, web development, and other IT-related fields without geographical or time constraints. This flexible learning approach allows students, including working professionals, to balance education with other commitments while continuously improving their technical and problem-solving abilities. As a result, the online BCA program ensures inclusive education and helps learners build strong competencies required for careers in the IT industry.
- **Industry-Relevant Curriculum:** The Online BCA program is designed with an industry-relevant curriculum to ensure that students acquire the knowledge and skills required in the modern IT sector. The curriculum includes subjects such as programming languages, database management, web development, cloud computing, and emerging technologies. It is regularly updated to reflect current industry trends and technological advancements. Through practical assignments, virtual labs, case studies, and project-based learning, students gain hands-on experience that prepares them for real-world challenges. This industry-focused approach helps students become competent professionals who can effectively meet the demands of the evolving technology industry.
- **Global Reach and Diversity:** The Online BCA program promotes global reach and diversity by providing access to quality education for students from different regions, backgrounds, and cultures. Through digital learning platforms, students from various geographical locations can enroll in the program and interact with peers and faculty in a virtual environment. This diverse learning community encourages the exchange of ideas, cultural understanding, and collaborative learning. By exposing students to global perspectives, international case studies, and modern technological practices, the online BCA program prepares learners to work effectively in the global IT industry and multicultural workplaces.

- **Technology Integration:** Technology integration is a key component of the Online BCA program, enabling effective and interactive digital learning. The program utilizes advanced learning management systems, virtual classrooms, online coding platforms, and digital resources to deliver course content efficiently. Students gain hands-on experience with modern software tools, programming environments, and collaborative technologies that enhance their technical skills. This integration of technology not only improves the learning experience but also prepares students to adapt to the rapidly evolving digital and IT industry.
- **Networking Opportunities:** The Online BCA program provides valuable networking opportunities that help students connect with peers, faculty, alumni, and industry professionals. Through virtual seminars, webinars, discussion forums, group projects, and online workshops, students can interact and share knowledge with individuals from diverse backgrounds. These networking platforms allow learners to build professional relationships, exchange ideas, and stay informed about industry trends. Such connections can support career development, internships, and future job opportunities in the IT and technology sectors.
- **Cost-effectiveness:** The Online BCA program is a cost-effective option for students seeking quality education in computer applications. Since the program is delivered through digital platforms, it reduces expenses related to travel, accommodation, and physical learning materials. Students can access lectures, study materials, and virtual resources from anywhere, making education more affordable and convenient. This cost-effective approach allows a larger number of learners to pursue higher education while gaining the necessary technical knowledge and skills required for careers in the IT industry.
- **Adaptability to Industry Changes:** The Online BCA program is designed to be adaptable to the rapidly changing demands of the IT industry. With the use of digital platforms and updated learning resources, the curriculum can be regularly revised to include new technologies, programming languages, and industry practices. This flexibility allows students to learn about emerging fields such as cloud computing, data analytics, and cybersecurity. By staying aligned with current technological advancements, the online BCA program ensures that students develop relevant skills and remain competitive in the evolving job market.

VI. Instructional Design:

Instructional design is the practice of designing, creating and delivering learning materials and programs. It can be applied to both physical and virtual education, including online courses.

ADDIE is a systematic and widely used framework for designing effective instructional programs and learning experiences. The acronym stands for Analysis, Design, Development, Implementation, and Evaluation. Each phase is interrelated and ensures that instruction is learner-centered, goal-oriented, and outcome-based.

Analysis

This is the foundation stage where instructional needs are identified. It involves analyzing learners' characteristics, learning gaps, performance problems, learning environment, and organizational goals. Clear instructional goals and constraints (time, resources, technology) are defined at this stage.

Design

In this phase, the instructional blueprint is created. Learning objectives are framed (often using Bloom's taxonomy), content is sequenced, assessment strategies are planned, and instructional methods and media are selected. The focus is on how learning will occur.

Development

Actual instructional materials are produced in this stage. This includes preparing lesson plans, e-content, presentations, activities, assessments, and learning resources. Content is developed as per the design specifications and reviewed for accuracy and alignment with objectives.

Implementation

The instructional program is delivered to learners. This may involve classroom teaching, online delivery, or blended learning. Facilitators are trained, learners are oriented, and instructional materials are used in real learning settings.

Evaluation

Evaluation determines the effectiveness of the instruction. It includes formative evaluation (ongoing feedback during all phases) and summative evaluation (assessment after implementation). Outcomes are measured against objectives, and findings are used for improvement.

In summary, the ADDIE model provides a structured, iterative approach to instructional design, ensuring quality, consistency, and continuous improvement in teaching-learning processes.

Program Structure

Sem	Category	Subject Code	Subject	L-T-P-C	Credit
1	Core-Major	OLBCA11	Foundation of Information Technology	3-0-2-4	4
1	Core-Major	OLBCA12	Problem-Solving using C	3-0-2-4	4
1	Core-Minor	OLBCA13	Basics of Internet and Web Design	3-0-0-3	3
1	OE/MD	OLBCA14	Information System	3-0-0-3	3
1	OE/MD	OLBCA15	Travel and Tourism Management	3-0-0-3	3
1	AEC	OLBCA16	Communicative English I	2-0-0-2	2
1	Core-Minor	OLBCA17	Fundamentals of Python Programming	3-0-0-3	3
1	SEC	OLBCA18	ESEP with Mathematics	2-0-0-2	2
1	VAC	OLBCA19	Environmental Studies	2-0-0-2	2

Sem	Category	Subject Code	Subject	L-T-P-C	Credit
2	Core-Major	OLBCA21	Object Oriented Programming	3-0-2-4	4
2	Core-Major	OLBCA22	Database Management and MYSQL	3-0-2-4	4
2	Core-Minor	OLBCA23	Computer Organization	3-0-0-3	3
2	OE/MD	OLBCA24	AI in Business Administration	3-0-0-3	3
2	Core-Minor	OLBCA25	Introduction to Data Science	3-0-0-3	3
2	AEC	OLBCA26	Digital Banking and Payments	2-0-0-2	2
2	Core-Minor	OLBCA27	Introduction to Artificial Intelligence & Cloud Computing	3-0-0-3	3
2	VAC	OLBCA28	Health & Wellness	2-0-0-2	2
2	SEC	OLBCA29	Digital Fluency	2-0-0-2	2

Sem	Category	Subject Code	Subject	L-T-P-C	Credit
3	Core-Major	OLBCA31	Data Structures using C++	3-0-2-4	4
3	Core-Major	OLBCA32	HTML, VB Script and Java Script	3-0-2-4	4
3	Core-Minor	OLBCA33	Operating Systems	3-0-0-3	3
3	OE/MD	OLBCA34	Customer Relationship Management	3-0-0-3	3

3	AEC	OLBCA36	Introduction to Big Data, Hadoop & Ecosystem	2-0-0-2	2
3	OE/MD	OLBCA35	Human Resources Management	3-0-0-3	3
3	Core- Minor	OLBCA37	Introduction to Machine Learning	3-0-0-3	3
3	SEC	OLBCA38	Google Cloud Basics	2-0-0-2	2
3	VAC	OLBCA39	Constitution of India	2-0-0-2	2

Sem	Category	Subject Code	Subject	L-T-P-C	Credit
4	Core-Major	OLBCA41	Programming in Core Java	3-0-2-4	4
4	Core-Major	OLBCA42	Introduction to Dev Ops	3-0-2-4	4
4	Core-Minor	OLBCA43	E-Commerce	3-0-0-3	3
4	Core-Minor	OLBCA44	Introduction to Robotics	3-0-0-3	3
4	Core-Major	OLBCA45	Neural Networks	3-0-2-4	4
4	VAC	OLBCA46	Introduction to Ethical Hacking	2-0-0-2	2
4	SEC	OLBCA47	Fundamentals of Data Virtualization	2-1-0-3	3

Sem	Category	Subject Code	Subject	L-T-P-C	Credit
5	Core-Major	OLBCA51	Web Application Using MERN stack (T+ L)	3-0-2-4	4
5	Core-Major	OLBCA52	LAMP Technology (T+ L)	3-0-2-4	4
5	Core-Minor	OLBCA53	Discipline Specific Elective (minor) -1	3-0-0-3	3
5	Core-Major	OLBCA54	Discipline Specific Elective (major) -1	3-0-0-3	3
5	Core-Minor	OLBCA55	Discipline Specific Elective (minor) -2	3-0-0-3	3
5	Core-Major	OLBCA56	Discipline Specific Elective (major) -2	3-0-0-2	2



5	SEC	OLBCA57	Design Thinking & Agile Methodologies.	2-0-0-2	2
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Sem	Category	Subject Code	Subject	L-T-P-C	Credit
6	Core-Major	OLBCA61	Internship Embedded Project Work & Viva voce (or) Research & Dissertation	0-0-54-18	18

Sem	Category	Subject Code	Subject	L-T-P-C	Credit
7	Core-Major	OLBCA71	Linux System Administration	3-0-2-4	4
7	Core-Major	OLBCA72	Advanced Java	3-0-2-4	4
7	Core-Major	OLBCA73	Research Methodology	3-1-0-4	4
7	Core-Major	OLBCA74	Software Engineering	4-0-0-4	4
7	Core-Major	OLBCA75	Big Data Analytics	3-0-0-3	3
7	Core-Major	OLBCA76	Augmented Reality	3-0-0-3	3

Sem	Category	Subject Code	Subject	L-T-P-C	Credit
8	Core-Major	OLBCA81	Internship embedded Project work & Viva Voce (or) Research work & Dissertation	0-0-54-18	18

Category	Subject Code	Subject	L-T-P-C	Credit
Elective pool for DSE (Minor & Major) (Select any 4)				
Elective	OLBCA53,54,44,56	TCP/IP Architecture and Protocols	3-0-0-3	3
Elective	OLBCA53,54,44,57	Digital Image Processing	3-0-0-3	3
Elective	OLBCA53,54,44,58	Mobile Application Development	3-0-0-3	3
Elective	OLBCA53,54,44,59	Applied Storage and Network Security	3-0-0-3	3
Elective	OLBCA53,54,44,60	Metaverse Technologies and Applications	3-0-0-3	3
Elective	OLBCA53,54,44,61	Augmented Reality Systems and Technologies	3-0-0-3	3
Elective	OLBCA53,54,44,62	Digital Forensic principles and applications	3-0-0-3	3
Elective	OLBCA53,54,44,63	Applications of IoT and Autonomous	3-0-0-3	3



SEMESTER I

1. OLBCA11 - Foundation of Information Technology

Attribute	Details
Course Code & Name	OLBCA11 - Foundation of Information Technology
Credits	4 Credits
L-T-P-C	3-0-2-4
Course Objectives	• To introduce basics of computers and memory architecture. • To understand storage, input, and output devices. • To learn algorithms, flowcharts, and programming basics. • To explore operating systems and internet fundamentals. • To gain hands-on skills in MS Office tools.
Course Outcomes	CO1: To relate the basic concepts and terminology of information technology. CO2: To illustrate the usage of personal computers and their operations. CO3: To develop the application to work with office software. CO4: To apply Hardware and Software skills in practical. CO5: To Determine the appropriate use of computer in various applications.
SLM Units (Block Pattern)	Block 1: Introduction to Computers (12 Hrs) Introduction, Characteristics of computers, Generations of Computers, Classification of computers, the computer system, Application of computers. Computer Architecture and Memory: Central processing Block, main memory Block, interconnection of Blocks, cache, memory representation, memory hierarchy, RAM, ROM. Block 2: Storage Devices (12 Hrs) Secondary Storage: classification, magnetic tape, magnetic disk, Optical disk, Memory stick, USB, Mass storage devices. Input and Output devices: Types of input devices, OCR, OMR, MICR, Barcode reader, Types of output, Classification of output devices, Terminals. Block 3: Introduction to Programming Language (12 Hrs) Computer Program: Introduction, algorithm, flowchart. Computer languages and Software: Evolution of programming languages, classification, generation, Features of a good programming language, software definition, relationship between software and hardware, software categories. Block 4: Basics of Operating System (12 Hrs) Internet Basics: Introduction, Evolution, Basic internet terms, getting connected to internet, internet applications. Operating System: Introductions, Functions of operating system, Types of operating System, OS and Utility Software, Introduction to LibreOffice. Block 5: Microsoft Office (12 Hrs) MS Office Word and Power Point: Uses, formatting, Advanced features, creating slides, Animations, Hyperlink. MS Office Excel and Access: uses, manipulating through formula, Adding and working with charts, Analyzing Data, creating, altering and inserting values, Queries, reports.
Reference Books	• ITL Education Solution Limited, Introduction to Information Technology, Pearson Education, 2012. • Peter Norton, Introduction to Computers, 7th edition, Tata McGraw Hill Publication, 2011. • Anita Goel, Computer Fundamentals, Pearson Education, 2011.

CO-PO Mapping Matrix

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	-	-	-	1	-	-	-	-	-	2	1
CO2	2	1	-	-	2	-	-	-	-	-	2	1
CO3	-	-	2	-	3	1	-	-	1	-	2	2
CO4	2	2	2	-	2	-	1	-	-	-	2	2
CO5	2	2	2	-	2	-	1	-	-	-	2	2

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	-	-	-	1
CO2	1	-	-	-	1
CO3	1	1	-	-	2
CO4	2	-	-	-	2
CO5	1	-	-	-	2

2. OLBCA12 - Problem-Solving using C

Attribute	Details
Course Code & Name	OLBCA12 - Problem-Solving using C
Credits	4 Credits
L-T-P-C	3-0-2-4
Course Objectives	- To understand the Fundamentals of C Programming. - To implement Control Structures for Program Logic.



Attribute	Details
	- To manipulate Data Using Arrays and Strings. - To work with Structures and Unions. - To write and Debug C Programs Effectively.
Course Outcomes	CO1: To learn and relate the basics of problem-solving methods by writing algorithms and flowcharts. CO2: To demonstrate how to convert algorithms and flowchart in to C Program. CO3: To develop coding skills by solving simple and complex problems. CO4: To apply programming logic to real world problem. CO5: Determine the appropriate use of C Programming in standalone Web applications.
SLM Units (Block Pattern)	Block 1: Introduction to C (12 Hrs) Problem Solving techniques: Algorithm development, Flowcharts, Pseudocode. Introduction to C: Overview, Importance, Basic structure, Execution. Constants, Variables and Data types: Character set, keywords, identifiers, constants, variables, data types, declarations. Block 2: Operators in C (12 Hrs) Operators and Expression: Arithmetic, Relational, logical, assignment, increment/decrement, conditional, bitwise, precedence, type conversions. Input/Output operations. Decision Making and Branching: if, if-else, nested if-else, switch, go to. Block 3: Looping and String Handling (12 Hrs) Decision making and looping: while, do, for, exit, break, jumps. Arrays: Declaration, initialization, 1D and 2D arrays, sorting and searching. Strings: Declaring, initializing, reading/writing, Arithmetic operations on characters, String Handling functions. Block 4: Functions and Recursion (12 Hrs) User-defined functions: Declaring, defining, calling, return values, categories of functions, nesting. Recursion: Definition, example programs. Storage classes: Scope, visibility and lifetime of variables. Block 5: Structures and Unions (12 Hrs) Structures and unions: Definition, initialization, arrays of structures, structures within structures, Unions. Pointers: Accessing address, declaring/initializing, pointer expressions, pointers and arrays, pointers and strings, function arguments. File Management.
Reference Books	E. Balagurusamy, Programming in ANSI C, 7th Edition, Tata McGraw Hill. - Brian W. Kernighan and Dennis M. Ritchie, "The C Programming Language". - Stephen G. Kochan, "Programming in C".

CO-PO Mapping Matrix

C O	P O 1	P O 2	P O 3	P O 4	P O 5	P O 6	P O 7	P O 8	P O 9	P O 10	P O 11	P O 12
C O 1	3	3	2	2	-	-	1	-	-	-	2	2
C O 2	2	2	3	3	-	-	1	-	-	-	2	2
C O 3	3	3	3	3	2	-	2	-	-	-	2	2

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO4	3	3	3	3	2	-	2	-	-	-	2	3
CO5	2	2	2	3	2	-	2	-	-	-	2	2

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	-	2	-	2
CO2	3	-	2	-	2
CO3	3	-	2	-	2
CO4	3	-	2	-	3
CO5	3	-	2	2	2

3. OLBCA13 - Basics of Internet and Web Design

Attribute	Details
Course Code & Name	OLBCA13 - Basics of Internet and Web Design
Credits	3 Credits
L-T-P-C	3-0-0-3
Course Objectives	• Understand internet concepts and tools for effective browsing. • Learn and apply various file conversion techniques. • Structure and format web content using HTML. • Style and position web elements using CSS. • Design interactive web forms for practical web development.
Course Outcomes	CO1: To Learn and recall the basic principles of internet technology. CO2: To work with various internet browsers. CO3: To design static web pages using HTML code. CO4: To develop web pages using HTML code. CO5: Debugging and problem solving in web development.
SLM Units (Block Pattern)	Block 1: Introduction to Web Design (11 Hrs) The Internet: Evolution, terms, connected, Internet applications. Internet tools: Web browser, features, Electronic mail, address structure, attachments, advantages/disadvantages. Search Engines: Searching, refining search, instant messaging.

Attribute	Details
	Block 2: Various types of Converters (11 Hrs) Audio/Document/Web Service/Video/E-book/Device/Image Converter, Hash Generator, Archive Converter, PDF To Word/JPG Converter. WWW and Web Browser: Objectives, Browsing Software, Search Engines, URL, Surfing the Web. Block 3: Introduction to HTML (11 Hrs) Introducing HTML and CSS: HTML standards, HTML5. Structuring HTML. Organizing information with Lists (Numbered, Unordered, Definition, Nesting). Links (Relative/Absolute Pathnames). Formatting Text: Character formatting, Line Breaks, Special Characters. Block 4: Introduction to CSS (12 Hrs) Using CSS to Style a Site: Style Sheets, Selectors, Color, Links, The Box Model. Using Images: Formats, Inline Images, Images as Links/Backgrounds/Bullets, Image maps. Building Tables: Parts, Sizing, Borders, Cell color.
Reference Books	• Sams Teach Yourself HTML, CSS and Java Script. • Introduction to Information Technology, ITL Education Solutions Limited. • Beginning HTML and CSS By Rob Larsen.

CO-PO Mapping Matrix

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	-	-	-	1	-	-	-	-	-	2	1
CO2	1	-	-	-	2	-	-	-	-	-	2	1
CO3	2	2	3	3	3	-	2	-	-	-	2	2
CO4	2	2	3	3	3	-	2	-	-	-	2	2
CO5	2	3	3	3	3	-	2	-	-	-	2	3

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	-	-	2	1
CO2	1	-	-	2	1
CO3	2	-	-	3	2

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO4	2	-	-	3	2
CO5	2	-	-	3	2

4. OLBCA14 - Information System

Attribute	Details
Course Code & Name	OLBCA14 - Information System
Credits	3 Credits
L-T-P-C	3-0-0-3
Course Objectives	• To introduce basics of computers and memory architecture. • To understand storage, input, and output devices. • To learn algorithms, flowcharts, and programming basics. • To explore operating systems and internet fundamentals. • To gain hands-on skills in MS Office tools.
Course Outcomes	CO1: To relate the basic concepts and terminology of information technology. CO2: To illustrate the usage of personal computers and their operations. CO3: To develop the application to work with office software. CO4: To apply information system in practical to develop communication skills. CO5: To Determine the appropriate use of information system in various applications.
SLM Units (Block Pattern)	Block 1: Introduction to Computers (11 Hrs) Introduction, Characteristics computers, Generations of Computers, Classification of computers, the computer system, Application of computers. Computer Architecture and Memory: Central processing Block, main memory Block, interconnection of Blocks, cache. Block 2: Computer Memories (11 Hrs) Computer memory and storage: Memory representation, memory hierarchy, Random access memory, Types of RAM, Read-only memory, Types of ROM. Secondary Storage: classification, magnetic tape, magnetic disk, Optical disk, Memory stick, Universal serial bus, Mass storage devices. Block 3: Input and Output Devices (12 Hrs) Introduction, Types of input devices, OCR, OMR, MICR, Bar code reader, Types of output, Classification of output devices, Monitor- CRT, LCD, Differences between LCD and CRT, Voice response, Projector, Electronic white board, Terminals. Computer Program: Introduction, algorithm, flowchart. Computer languages and Software: Evolution of programming languages, classification, generation, Features of a good programming language, software definition, relationship between software and hardware, software categories. Block 4: Introduction to Programming (11 Hrs) Word processing software, Spreadsheet software: Excel environment, Copying cells using Fill handle, Formulas and functions, Inserting Charts, sorting. Presentation software: PowerPoint environment, animations. Microsoft Access: Database objects. Introduction to AI and IOT.
Reference Books	• ITL Education Solution Limited, Introduction to Information Technology, Pearson Education, 2012.



Attribute	Details
	• Peter Norton, Introduction to Computers, 7th edition, Tata McGraw Hill Publication, 2011.

CO-PO Mapping Matrix

C O	P O 1	P O 2	P O 3	P O 4	P O 5	P O 6	P O 7	P O 8	P O 9	P O 10	P O 11	P O 12
C O 1	3	-	-	-	1	-	-	-	-	-	2	1
C O 2	2	-	-	-	2	-	-	-	-	-	2	1
C O 3	-	-	2	-	3	1	-	-	2	-	2	2
C O 4	2	-	2	-	2	-	-	-	3	-	2	2
C O 5	2	2	2	-	2	1	1	-	-	-	2	2

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	-	-	-	1
CO2	1	-	-	-	1
CO3	2	1	-	-	2
CO4	1	-	-	-	2
CO5	2	1	-	-	2

5. OLBCA15 - Travel and Tourism Management

Attribute	Details
Course Code & Name	OLBCA15 - Travel and Tourism Management
Credits	3 Credits



Attribute	Details
L-T-P-C	3-0-0-3
Course Objectives	- To introduce the fundamental concepts, history, and organizational structures of the travel agency and tour operation business. - To familiarize students with the diverse functions and operational services of a travel agency. - To provide a comprehensive understanding of tour operator management.
Course Outcomes	CO1: Compare and contrast the different types, structures, and roles of travel agencies and tour operators. CO2: Develop and design various types of tour itineraries. CO3: Analyze the complete process of tour package formulation. CO4: Explain the sources of income for a travel agent and the key legal and practical steps required to set up an approved travel agency. CO5: Develop marketing strategies for tourism products.
SLM Units (Block Pattern)	Block 1: Travel Agency Fundamentals and Structure (11 Hrs) Travel Agency: History; Types. Travel Agency Structure: Present Status; Organisational Structure. Difference between Travel Agency & Tour Operation Business; Procedure for Approval (DOT Rules). Travel Agent: Definition; Duties and Rights. Block 2: Agency Functions and Operations (11 Hrs) Functions and Services: Itinerary Preparation; Ticketing; Tour Packaging and Pricing; Reservations; Insurance. Itinerary Planning: Types of Itinerary (GIT, FIT). Income Of Travel Agent: Sources of Income; Revenue Management. Block 3: Tour Operator Management (11 Hrs) Tour Operator: Types (Inbound, Outbound, Domestic); Rules for Recognition. Package Formulation: Market Research; Negotiations; Tour Costing; Pricing; Marketing. Planning a Tour Itinerary Components. Setting Up Of Tour Operator Unit: Basic Requirements. Block 4: Tourism Marketing and Management and Economics and Finance (12 Hrs) Tourism marketing strategies ,Destination marketing, Customer relationship management, Digital marketing in tourism, Sales promotion for tourism products, Economics of tourism, Accounting for tourism businesses, Financial management in hospitality, Tourism investment and revenue generation
Reference Books	- Bhatia, A. K. (2012). The business of travel agency and tour operations management. - Chand, M. (2009). Travel agency management: An introductory text. - Negi, J. (2008). Travel agency and tour operation: Principles and practices.

CO-PO Mapping Matrix

C O	P O 1	P O 2	P O 3	P O 4	P O 5	P O 6	P O 7	P O 8	P O 9	P O 10	P O 11	P O 12
C O 1	-	1	-	-	-	-	1	1	-	-	1	2
C O 2	-	2	2	-	-	-	1	1	-	-	1	2
C O 3	-	3	2	-	-	1	1	-	-	-	1	2

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO4	-	1	1	-	-	-	1	2	-	-	1	3
CO5	2	2	2	-	2	1	1	-	-	-	2	2

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	-	-	-	-	2
CO2	-	-	-	-	2
CO3	-	1	-	-	2
CO4	-	-	-	-	3
CO5	2	1	-	-	2

6. OLBCA16 - Communicative English I

Attribute	Details
Course Code & Name	OLBCA16 - Communicative English I
Credits	2 Credits
L-T-P-C	2-0-0-2
Course Objectives	• Develop confidence in everyday spoken English through interactive and practical communication tasks. • Enhance vocabulary, listening, and fluency. • Gain foundational writing skills required for professional situations.
Course Outcomes	CO1: Develop the ability to listen and comprehend spoken English in different academic and social contexts. CO2: Demonstrate effective oral communication skills through presentations, discussions, and conversations. CO3: Improve reading skills to understand and interpret various types of texts such as articles, reports, and essays. CO4: Develop writing skills to produce clear and coherent sentences, paragraphs, emails, and short reports. CO5: Apply appropriate grammar, vocabulary, and pronunciation to communicate confidently and accurately in English.
SLM Units (Block Pattern)	Block 1: Personality Development (10 Hrs) Self-Introductions & Greetings, Small Talk, Expressing Feelings, Roleplays, Interview Etiquette, Customer Service, Professional Phone Talk, Team Meeting Simulation, Email

Attribute	Details
	speaking, Formal Writing, Public Speaking, Usage of Idioms. Block 2: Learning Through Communication activity (10 Hrs) Building vocabulary through games, Active listening and quick response practice, Spontaneous speaking skills, Team communication and collaboration, Clear articulation and fluency, Verbal, Non-verbal, Formal, Informal. Block 3: Essentials of Professional Writings (10 Hrs) Introduction to Writing, Leave Letter, Apology Letter, Appreciation Letter, Simple Business Letters - Complaint Letter, Enquiry Letter, Email & SMS Etiquette, Job-Related Writings -Resume, Cover Letter, Simple Report Writing.
Reference Books	• Speech Communication made simple - Paulette Dale, PH.D. • Public Speaking (An Audience Centred Approach) - Beebe & Steven A. • Business Communications from Principles to Practice - Matthukutty M. Monipally.

CO-PO Mapping Matrix

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	-	-	-	-	-	-	-	2	3	2	2	3
CO2	-	-	-	-	-	-	-	1	3	2	2	2
CO3	-	-	-	-	1	-	-	2	3	1	2	3
CO4	-	1	1	-	-	-	1	2	-	-	1	3
CO5	2	2	2	-	2	1	1	-	-	-	2	2

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	-	-	-	-	3
CO2	-	-	-	-	2
CO3	-	-	1	-	3
CO4	-	-	-	-	3
CO5	2	1	-	-	2

7. OLBCA17 - Fundamentals of Python Programming

Attribute	Details
Course Code & Name	OLBCA17 - Fundamentals of Python Programming
Credits	3 Credits
L-T-P-C	3-0-0-3
Course Objectives	- To learn the fundamentals of the Python programming language. - To understand Python lists, tuples to represent compound data. - To write and execute simple as well as complex Python programs. - To introduce the concepts of procedural as well as object-oriented Python programs. - To understand how to access files and handle exception from Python.
Course Outcomes	CO1: Explain the features of Python programming language. CO2: Create, populate and retrieve any type of compound information in python. CO3: Implement simple and complex programs for real life applications. CO4: Analyze the object-oriented concepts and apply concepts in implementation of program. CO5: Describe concepts of file accessing and develop python programs for file processing.
SLM Units (Block Pattern)	Block 1: Fundamentals (11 Hrs) UNIT 1: Python Fundamentals: Introduction, Features, Identifiers, Indentation. UNIT 2: Data Types and Operators: Strings, List, Tuples, Dictionary, Set, Type Conversion. UNIT 3: Program Execution and Precedence. UNIT 4: Decision Making and Looping: if, if-else, while, for, break, continue. Block 2: Arrays and Strings (11 Hrs) UNIT 5: Arrays and Strings: Arrays in Python, Strings and Characters. UNIT 6: String Methods and Functions: Slices, Immutability, Block. UNIT 7: Lists as Arrays. UNIT 8: Search Algorithms: Linear Search, Binary Search. Block 3: Functions and OOP (11 Hrs) UNIT 9: Functions: User defined functions, arguments and types. UNIT 10: Object-Oriented Programming Concepts: Class and Objects, Constructors, Data hiding, Data Abstraction. UNIT 11: Inheritance. Block 4: Files and Exceptions (12 Hrs) UNIT 12: Files and Exception Handling: Text Files, Reading and Writing Files, Format Operator; Command Line Arguments, Errors and Exceptions, Blocks, Packages; Illustrative Programs: Word Count, Copy File.
Reference Books	(Note: Latest edition of Python Programming text books to be used as recommended by the university).

CO-PO Mapping Matrix

C O	P O 1	P O 2	P O 3	P O 4	P O 5	P O 6	P O 7	P O 8	P O 9	P O 10	P O 11	P O 12
C O 1	2	-	-	2	1	-	-	-	-	-	2	2
C O	2	2	2	3	1	2	-	-	-	-	2	2

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
2												
CO3	3	3	3	3	2	-	2	-	-	-	2	3
CO4	2	3	3	3	2	-	2	-	-	-	2	2
CO5	2	2	3	3	2	2	1	-	-	-	2	2

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	-	-	1	1
CO2	2	1	-	1	2
CO3	3	1	2	1	3
CO4	3	1	2	1	3
CO5	3	2	2	1	2

8. OLBCA18 - ESEP with Mathematics

Attribute	Details
Course Code & Name	OLBCA18 - ESEP with Mathematics
Credits	2 Credits
L-T-P-C	2-0-0-2
Course Objectives	To equip students with foundational mathematical techniques relevant to computer science and data analysis.
Course Outcomes	CO1: Apply matrix algebra and determinants to solve linear equations. CO2: Perform differential calculus operations to analyze function behavior. CO3: Understand and apply vector algebra operations. CO4: Compute operations and applications using complex numbers. CO5: Evaluate environmental sustainability by applying mathematical tools for measurement, comparison, and prediction of environmental changes.

Attribute	Details
SLM Units (Block Pattern)	Block 1: Matrices and Determinants (10 Hrs) Determinants and Their Properties: Minors, cofactors. UNIT 2: Matrix Algebra: Types, adjoint, inverse. UNIT 3: Rank and Systems of Linear Equations: Elementary row operation (ERO), solving linear simultaneous equations. Block 2: Differential Calculus and its Applications (10 Hrs) Fundamentals of Differentiation: Product, quotient, function of a function. UNIT 5: Advanced Differentiation: Logarithmic, Implicit, parametric. UNIT 6: Mean Value Theorems: Rolle's, Lagrange's, Taylor/Maclaurin series. UNIT 7: Maxima and minima. Block 3: Vector Algebra (10 Hrs) Introduction to Vectors. UNIT 9: Vector Products: Scalar (dot) and vector (cross) products. UNIT 10: Scalar and Vector Triple Products.
Reference Books	<i>(Note: Latest edition of Mathematics for BCA text books may be used as recommended).</i>

CO-PO Mapping Matrix

C O	P O 1	P O 2	P O 3	P O 4	P O 5	P O 6	P O 7	P O 8	P O 9	P O 10	P O 11	P O 12
C O 1	3	3	1	-	1	2	-	-	-	-	1	1
C O 2	3	3	1	-	1	1	-	-	-	-	1	1
C O 3	3	2	1	-	-	1	-	-	-	-	1	1
C O 4	3	2	1	-	-	-	-	-	-	-	1	1
C C O 5	2	2	3	3	2	2	1	-	-	-	2	2

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	-	-	1
CO2	1	1	-	-	1
CO3	1	-	-	-	1
CO4	1	-	-	-	1



CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO5	3	2	2	1	2

9. OLBCA19 - Environmental Studies

Attribute	Details
Course Code & Name	OLBCA19 - Environmental Studies
Credits	2 Credits
L-T-P-C	2-0-0-2
Course Objectives	• To focus on SDG's fulfillment as a responsible citizen. • To understand environmental issues and its impact.
Course Outcomes	CO1: Get awareness of the ecological and environmental concerns of the society. CO2: Understand global agendas of climate change, greenhouse gases, emissions. CO3: Develop a temperament towards conservation and ecological sustenance. CO4: Apply knowledge of environmental laws, policies, and conservation methods for sustainable development. CO5: Develop environmental awareness and responsible attitudes to participate in environmental protection and conservation activities.
SLM Units (Block Pattern)	Block 1: Introduction to Environment (10 Hrs) Environmental Studies- Introduction, Definition, Nature, Scope and Importance, Eco System, Natural Resources. Block 2: Environmental Issues (10 Hrs) Environmental Pollution- Meaning, Definition, Causes, Types: Air, Water, Soil, Marine, Thermal. Issues: Climate Change, Global Warming, Acid Rain, Ozone Layer depletion. Legal measures- Environmental Protection Act. Block 3: Sustainable Development (10 Hrs) Concept of Triple Bottom Line, Sustainable Development, 17 goals of UNSDG.
Reference Books	• Shyam Divan and Armin Rosencrantz, Environmental Law and Policy in India. • Majid Hussain, Environment and Ecology.

CO-PO Mapping Matrix

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	-	-	-	-	-	-	-	3	-	-	2	1
CO2	-	-	-	-	-	-	-	2	-	-	2	1

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C O	P O 1	P O 2	P O 3	P O 4	P O 5	P O 6	P O 7	P O 8	P O 9	P O 10	P O 11	P O 12
C O 3	-	-	-	-	-	-	-	3	-	-	3	2
C O 4	3	2	1	-	-	-	-	-	-	-	1	1
C C O 5	2	2	3	3	2	2	1	-	-	-	2	2

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	-	-	-	-	2
CO2	-	-	-	-	2
CO3	-	-	-	-	2
CO4		-	-	-	2
CO5					2



SEMESTER II

10. OLBCA21 - Object Oriented Programming

Attribute	Details
Course Code & Name	OLBCA21 - Object Oriented Programming
Credits	4 Credits
L-T-P-C	3-0-2-4
Course Objectives	- To understand the basic concepts and principles of object-oriented programming. - Learn to create and use classes, objects, constructors, and destructors in C++. - Implement inheritance and polymorphism to build flexible and reusable code.
Course Outcomes	CO1: Recall the difference between the top-down and bottom-up approach in programming. CO2: Demonstrate the object-oriented programming approach in with C++. CO3: Develop programs using the concepts C++. CO4: To apply OOP skills in practical to develop real world problem. CO5: To Determine the appropriate use of OOP in various applications.
SLM Units (Block Pattern)	Block 1: Introduction to OOP (12 Hrs) Principles of Object Oriented programming. Classes and objects: Specifying a class, creating objects, accessing class members, arrays within a class. Memory allocation for objects, static data members, arrays of objects, objects as function arguments, friend functions. Block 2: Constructors and Destructors (12 Hrs) Parameterized constructors, default arguments, copy constructor, destructors. Operator overloading: unary and binary operators, Manipulation of strings. Block 3: Function Overloading (12 Hrs) Function Overloading, changing number and types of arguments. Inheritance: Single, protected members, multilevel, multiple, hierarchical, hybrid, virtual base classes, abstract classes. Block 4: Pointers to Objects (12 Hrs) Pointers, Pointers to Objects, this pointer. Virtual Functions and Polymorphism: Function Overriding, pure virtual functions. Block 5: Class Templates (12 Hrs) Templates: Class and function templates. Exception Handling: Basics, Mechanism, throwing, catching, Re-throwing.
Reference Books	- E Balagurusamy, Object Oriented Programming with C++, 5th Edition. - D Ravichandran, Programming with C++. - Robert Lafore, Oriented Programming in C++.

CO-PO Mapping Matrix

C O	P O 1	P O 2	P O 3	P O 4	P O 5	P O 6	P O 7	P O 8	P O 9	P O 10	P O 11	P O 12
C O 1	2	2	-	2	-	-	2	-	-	-	2	1

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO2	2	3	3	3	2	-	2	-	-	-	2	2
CO3	3	3	3	3	2	-	2	-	-	-	3	3
CO4	2	3	3	3	2	-	3	-	-	1	2	3
CO5	2	3	3	3	2	-	3	-	-	1	2	3

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	-	2	-	1
CO2	3	-	2	-	2
CO3	3	-	3	-	3
CO4	3	-	3	-	3
CO5	3	-	3	-	3

11. OLBCA22 - Database Management and MYSQL

Attribute	Details
Course Code & Name	OLBCA22 - Database Management and MYSQL
Credits	4 Credits
L-T-P-C	3-0-2-4
Course Objectives	• Understand Database Fundamentals and Architecture. • Design Databases Using Conceptual and Relational Models. • Apply Relational Algebra and Normalize Database Schemas. • Implement and Manage Databases Using MySQL.
Course Outcomes	CO1: To define concept related to File system and database. CO2: To demonstrate the terminologies related to DBMS. CO3: To construct queries using DDL, DML in MYSQL. CO4: To apply DBMS skills in practical to develop different types of applications. CO5: To Determine the appropriate use of DBMS in various applications.

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	3	1	-	1
CO2	1	3	1	-	2
CO3	2	3	2	1	3
CO4	3	3	3	2	3
CO5	2	3	2	1	3

12. OLBCA23 - Computer Organization

Attribute	Details
Course Code & Name	OLBCA23 - Computer Organization
Credits	3 Credits
L-T-P-C	3-0-0-3
Course Objectives	• To perform number system conversions and binary arithmetic. • To apply Boolean algebra and logic gate principles. • To design sequential circuits using flip-flops and state diagrams.
Course Outcomes	CO1: To define and solve problems in number systems concepts. CO2: To demonstrate the working of various Boolean Functions. CO3: To construct various types of registers and counters. CO4: To apply Computer Organization skills in practical to develop Hardware. CO5: To Determine the appropriate use of Computer Organization in various applications.
SLM Units (Block Pattern)	Block 1: Number System (11 Hrs) Decimal, Binary and Hexadecimal numbers, Number base conversion, Complements, Binary codes, Binary arithmetic's, 1's and 2's complement system. Block 2: Boolean Algebra (11 Hrs) Axiomatic definition of Boolean algebra, Basic theorems. Digital logic gates, Canonical and Standard forms. Simplification: map method, Two and three variable maps, Don't Care conditions. Block 3: Logic Gates (11 Hrs) Implementation of SOP using NAND and NOR gates. Adder and Subtractor - Half/Full Adder, Half/Full Subtractor, Parallel Binary adder, BCD adder. Block 4: Flip Flop and Sequential circuits (12 Hrs) Flip flops, RS-FF, D-FF, T-FF, JK-FF. Triggering, Master Slave Flip flop, state table, State diagram, State equations, Introduction to Registers.
Reference Books	• M. Morris Mano, "Digital Logic and Computer Design", PHI. • Thomas L Floyd, "Digital Fundamentals". • B. Ram, "Computer Fundamentals Architecture and Organization".

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	2	-	-	-	2	-	-	-	1	1
CO2	3	3	2	-	-	-	2	-	-	-	1	1
CO3	3	3	3	1	1	-	2	-	-	-	2	2
CO4	2	2	3	1	2	-	3	-	-	1	2	2
CO5	2	2	2	-	1	-	2	-	-	-	2	2

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	-	1	-	1
CO2	1	-	1	-	1
CO3	1	-	2	-	2
CO4	1	-	2	-	2
CO5	1	-	1	-	2

13. OLBCA24 - AI in Business Administration

Attribute	Details
Course Code & Name	OLBCA24 - AI in Business Administration
Credits	3 Credits
L-T-P-C	3-0-0-3
Course Objectives	• Understand the basic concepts and technologies of Artificial Intelligence (AI). • Explore the transformative impact of AI on business administration. • Discuss the ethical and legal considerations of AI in business.
Course Outcomes	CO1: Students will be able to define AI and its core technologies. CO2: Students will identify and describe various AI applications in different business contexts.



Attribute	Details
	CO3: Students will understand the ethical and legal implications of AI in business operations. CO4: Students will be able to evaluate the impact of AI on business strategies, customer experience, and organizational performance. CO5: Students will be able to demonstrate awareness of ethical issues, data privacy, and challenges related to the use of AI in business environments.
SLM Units (Block Pattern)	Block 1: Fundamentals of AI and its Business Impact (11 Hrs) Introduction to AI, Business Applications of AI, AI and Business Strategy, Ethical Considerations, Legal and Regulatory Issues. Block 2: AI in Marketing and Customer Relationship Management (11 Hrs) AI in Marketing Analytics, Personalized Marketing, AI-Powered CRM, Customer Experience, AI and Social Media. Block 3: AI in Operations and Decision Making (11 Hrs) AI in Management Information System, Predictive Analytics, Decision Support Systems, Process Automation, AI and Human Resources. Block 4: Ethical and Strategic Issues of AI (12 Hrs) Ethical issues in AI, Data privacy and security, Challenges of implementing AI in organizations, Future of AI in business, AI and digital transformation
Reference Books	• Russell, S. J., & Norvig, P. (2021). Artificial intelligence: A modern approach. • Sharda, R. Analytics, data science, and artificial intelligence. • Marr, B. Artificial intelligence in practice.

CO-PO Mapping Matrix

C O	P O 1	P O 2	P O 3	P O 4	P O 5	P O 6	P O 7	P O 8	P O 9	P O 10	P O 11	P O 12
C O 1	2	2	-	-	1	2	1	2	-	-	2	2
C O 2	2	2	1	-	2	2	2	1	-	-	3	3
C O 3	1	2	1	-	1	1	2	3	-	-	2	2
C O 4	2	2	3	1	2	-	3	-	-	1	2	2
C O 5	2	2	2	-	1	-	2	-	-	-	2	2

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	-	-	2
CO2	1	2	1	1	3
CO3	1	1	1	-	3
CO4	1	-	2	-	2
CO5	1	-	1	-	2

14. OLBCA25 - Introduction to Data Science

Attribute	Details
Course Code & Name	OLBCA25 - Introduction to Data Science
Credits	3 Credits
L-T-P-C	3-0-0-3
Course Objectives	• To introduce students to the basics of data collection, cleaning, and preprocessing. • To develop analytical thinking and exploratory data analysis (EDA) skills. • To familiarize students with foundational machine learning concepts.
Course Outcomes	CO1: To recall the basic of Data Science. CO2: To implement different tools for Data Science. CO3: To work with SQL for Data Science. CO4: To work with Machine Learning in Data Science. CO5: To work with various applications of Data Science.
SLM Units (Block Pattern)	Block 1: Introduction (11 Hrs) What Is Data Science? Computational Thinking, Tools, Issues of Ethics, Bias, and Privacy. Data Types, Collections, Pre-processing, Descriptive/Predictive Analytics. Block 2: Tools for Data Science (11 Hrs) UNIX: Access, Commands, Piping. Python: Basics, Control Structures, Statistics. R: Getting Started, Graphics, Data Visualization. Block 3: MySQL (11 Hrs) Getting Started, Creating/Inserting/Retrieving Records, Accessing MySQL with Python/R. Block 4: Machine Learning for Data Science (12 Hrs) Regression, Gradient Descent. Supervised Learning: Logistic Regression, kNN, Decision Tree, Random Forest, SVM.
Reference Books	• A Hands on Introduction to Data Science by Chirag Shah. • Introduction to Data Science: Data Analysis and Prediction, Rafael A. Irizarry.

CO-PO Mapping Matrix

Registrar
REGISTRAR



CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	1	1	2	3	1	2	-	-	2	2
CO2	2	2	2	3	3	3	2	-	-	1	3	3
CO3	2	2	3	3	3	3	2	-	-	-	2	3
CO4	3	3	3	3	3	3	2	-	-	-	3	3
CO5	2	3	3	2	3	3	2	1	1	1	3	3

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	2	1	1	2
CO2	2	2	1	1	3
CO3	2	3	1	1	3
CO4	2	3	1	2	3
CO5	2	3	2	2	3

15. OLBCA26 - Digital Banking and Payments

Attribute	Details
Course Code & Name	OLBCA26 - Digital Banking and Payments
Credits	2 Credits
L-T-P-C	2-0-0-2
Course Objectives	- Familiarize the Evolution and Landscape of Digital Banking. - Examine Payment Systems and Innovations. - Explore regulatory frameworks and security issues.
Course Outcomes	CO1: Familiarize the digital banking and payment systems. CO2: Evaluate different digital payment methods, platforms.



Attribute	Details
	CO3: Apply theoretical knowledge to real-world scenarios in financial inclusion. CO4: Evaluate the security measures, risks, and regulatory frameworks related to digital banking and online payment systems. CO5: Apply knowledge of digital payment platforms and banking applications for safe and effective financial transactions.
SLM Units (Block Pattern)	Block 1: Introduction to Digital Banking and Payments (10 Hrs) Evolution, advantages, digital payment systems (EFT, mobile payments, digital wallets), Key players. Block 2: Digital Banking Platforms and Technologies (10 Hrs) Online banking portals, mobile banking apps, Emerging technologies: AI, blockchain, biometrics. Block 3: Digital Payment Methods and Innovations (10 Hrs) Card payments, bank transfers, QR codes, cryptocurrencies, POS systems, payment gateways, P2P transfers.
Reference Books	• The Fin tech book – Susanne Chishti. • The Digital Banking Revolution – Luigi Wewege. • The Digital Payment Revolution in India - Ravi Menon.

CO-PO Mapping Matrix

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	1	-	-	2	2	1	1	-	-	2	2
CO2	2	2	2	1	3	2	2	2	-	-	3	3
CO3	2	3	3	2	3	2	2	2	1	1	3	3
CO4	3	3	3	3	3	3	2	-	-	-	3	3
CO5	2	3	3	2	3	3	2	1	1	1	3	3

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	-	1	2
CO2	2	2	-	2	3



CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO3	2	2	1	2	3
CO4	2	3	1	2	3
CO5	2	3	2	2	3

16. OLBCA27 - Introduction to Artificial Intelligence and Cloud Computing

Attribute	Details
Course Code & Name	OLBCA27 - Introduction to Artificial Intelligence and Cloud Computing
Credits	3 Credits
L-T-P-C	3-0-0-3
Course Objectives	• To provide fundamental knowledge about artificial intelligence. • To study various algorithms to solve AI problems. • To Learn Knowledge representation and representation of facts.
Course Outcomes	CO1: To recall the basic algorithms of AI. CO2: To relate the algorithms to solve real-world problems. CO3: To identify the risks involved, and its impact and develop the cloud applications. CO4: To relate the various concepts of cloud computing techniques. CO5: To explain cloud Storage systems and Cloud Security.
SLM Units (Block Pattern)	Block 1: Overview of A.I (11 Hrs) Introduction to AI, Turing test. Defining the problem as a state space search, Production system, control strategies. Block 2: Heuristic search techniques (11 Hrs) Generate and test, Hill climbing, best first search. Knowledge representation, organization, manipulation. Block 3: Natural language processing (11 Hrs) Overview of linguistics, Grammars and languages, parsing techniques. Pattern recognition: recognition and classification process. Block 4: Introduction to Cloud Computing (12 Hrs) Web 2.0, cloud types, deployment models, SaaS, virtualization, Grid Computing, service oriented architecture.
Reference Books	• E. Rich and K. Knight, Artificial Intelligence. • D.W. Patterson, Introduction to AI and Expert Systems. • Kris Jamsa, Cloud Computing.

CO-PO Mapping Matrix

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	1	1	1	1	1	-	-	-	2	1
CO2	3	3	3	2	2	2	2	-	-	-	2	3
CO3	2	2	3	2	3	2	3	2	-	-	3	3
CO4	2	2	2	-	3	1	2	-	-	-	3	2
CO5	2	2	2	-	3	2	2	2	-	-	2	2

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	1	1	-	1
CO2	2	1	2	1	2
CO3	3	2	2	3	3
CO4	2	1	2	3	2
CO5	2	2	2	2	2

17. OLBCA28 - Health & Wellness

Attribute	Details
Course Code & Name	OLBCA28 - Health & Wellness
Credits	2 Credits
L-T-P-C	2-0-0-2
Course Objectives	- To understand the dimensions of wellness, the various factors affecting each dimension. - Understanding the role of food and nutrients in health. - Developed self-awareness and self-management.
Course Outcomes	CO1: Recognize the importance of Physical & mental health. CO2: Understand the concept of nutrition.



Attribute	Details
	CO3: Analyze the importance of emotional intelligence. CO4: Demonstrate awareness of mental health, stress management, and emotional well-being. CO5: Apply knowledge of personal hygiene, healthy habits, and preventive healthcare to improve overall quality of life.
SLM Units (Block Pattern)	Block 1: Concept of Food (10 Hrs) Definition of food, Dimension of Health – physical, social and mental health; Food pyramid. Block 2: Basics of Nutrition (10 Hrs) Definition of Nutrition; Group of Nutrients; Diet – balanced diet, malnutrition, Deficiency diseases. Block 3: Emotional Learning (10 Hrs) Emotions, Brain vs. emotions, Components of emotional intelligence, self-awareness, self-regulation.
Reference Books	• Passmore R. and Davidson S, (2006), Human nutrition and Dietetics.

CO-PO Mapping Matrix

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	-	-	-	-	-	-	-	2	-	-	2	1
CO2	-	-	-	-	-	-	-	1	-	-	2	1
CO3	-	-	-	-	-	-	-	2	-	2	2	1
CO4	2	2	2	-	3	1	2	-	-	-	3	2
CO5	2	2	2	-	3	2	2	2	-	-	2	2

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	-	-	-	-	1
CO2	-	-	-	-	1
CO3	-	-	-	-	2



CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO4	2	1	2	3	2
CO5	2	2	2	2	2

18. OLBCA29 - Digital Fluency

Attribute	Details
Course Code & Name	OLBCA29 - Digital Fluency
Credits	2 Credits
L-T-P-C	2-0-0-2
Course Objectives	• Using a range of basic and emerging digital technologies and devices. • Digital editing and reviewing techniques. • Making use of available internet functions.
Course Outcomes	CO1: Recognize the basic requirements of digital technology. CO2: Understand digital content needed for business. CO3: Analyze, understand and publish company analysis reports. CO4: Analyze and evaluate digital information for accuracy, reliability, and ethical use. CO5: Practice safe and responsible digital behavior, including cybersecurity awareness and digital ethics.
SLM Units (Block Pattern)	Block 1: Introduction to Windows (10 Hrs) Desktop, icon, task bar, mouse pointer, start button, create folders, Wall paper setting. Block 2: MS- Office (10 Hrs) MS word screen, Typing the text, EXCEL, Power point. Block 3: Indian Company Analysis (10 Hrs) How to study secondary reports, how to write a research paper- citation - publication – IPR.
Reference Books	• The learning resources made available for the course titled “Digital 101” on Future Skills Prime Platform of NASSCOM.

CO-PO Mapping Matrix

C O	P O 1	P O 2	P O 3	P O 4	P O 5	P O 6	P O 7	P O 8	P O 9	P O 10	P O 11	P O 12
CO1	1	-	-	-	2	-	-	-	-	-	2	1
CO2	1	1	-	-	3	-	-	1	2	-	2	2

C O	P O 1	P O 2	P O 3	P O 4	P O 5	P O 6	P O 7	P O 8	P O 9	P O 10	P O 11	P O 12
C O 3	1	2	1	-	2	2	1	1	3	1	2	2
C O 4	2	2	2	-	3	1	2	-	-	-	3	2
C O 5	2	2	2	-	3	2	2	2	-	-	2	2

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	-	-	-	1	1
CO2	1	1	-	1	2
CO3	1	2	1	1	3
CO4	2	1	2	3	2
CO5	2	2	2	2	2



SEMESTER III

19. OLBCA31 - Data Structures using C++

Attribute	Details
Course Code & Name	OLBCA31 - Data Structures using C++
Credits	4 Credits
L-T-P-C	3-0-2-4
Course Objectives	• To develop problem-solving skills. • To implement dynamic memory allocation. • To analyze and apply tree and binary tree concepts. • To compare and apply sorting and searching algorithms.
Course Outcomes	CO1: To describe the common applications for arrays, records, linked structures, stacks, queues. CO2: To develop skills to write programs that use arrays, linked structures. CO3: To discuss the computational efficiency of sorting and searching. CO4: To develop the knowledge in stacks and queues. CO5: To develop the logic building knowledge.
SLM Units (Block Pattern)	Block 1: Introduction to data structures (12 Hrs) Basic terminology; Data Structure Operations, Algorithms, Control structure. Recursion: Factorial, Fibonacci sequence, Towers of Hanoi. Block 2: Stacks and Queues (12 Hrs) Stacks: Array/Linked representation, Operations, postfix and prefix notations, Evaluation of postfix. Queues: Array/Linked representation, Simple, Circular, Double ended, Priority queues. Block 3: Dynamic memory management (12 Hrs) Memory allocation: malloc, calloc, realloc and free. Linked list: Singly, Doubly, Header, Circular linked list, Traversing, Searching, Insertion, Deletion. Block 4: Trees (12 Hrs) Trees: Terminologies. Binary trees: strict, complete, binary search tree, Traversal (preorder, inorder, postorder). Block 5: Sorting and Searching (12 Hrs) Sorting: Selection, Bubble, Quick, Insertion, Merge sort. Searching: Sequential, Binary search. Graphs: Matrix representation; BFS and DFS.
Reference Books	• Seymour Lipschutz, Data Structures with C++, Tata McGraw Hill. • Ellis Horowitz and Sartaj Sahni, Fundamentals of Data Structures. • Aaron M. Tenenbaum, Data structures using C++.

CO-PO Mapping Matrix

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO 1	3	2	1	2	-	3	1	-	-	-	2	2

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO2	3	3	3	3	2	3	2	-	-	-	2	3
CO3	3	3	2	2	-	3	1	-	-	-	2	2
CO4	3	3	3	3	2	3	2	-	-	-	2	2
CO5	3	3	3	3	2	3	3	-	-	1	3	3

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	1	-	2
CO2	3	2	2	-	3
CO3	2	2	1	-	2
CO4	3	2	2	-	3
CO5	3	2	3	-	3

20. OLBCA32 - HTML, VB Script and Java Script

Attribute	Details
Course Code & Name	OLBCA32 - HTML, VB Script and Java Script
Credits	4 Credits
L-T-P-C	3-0-2-4
Course Objectives	- Understand and use HTML and CSS to create structured and styled web pages. - Use JavaScript to add interactivity and logic. - Write simple scripts using VBScript. - Build responsive, mobile-first websites using Bootstrap.
Course Outcomes	CO1: To Identify the principles of web coding and good design. CO2: To demonstrate web page Design using HTML tags and features of CSS. CO3: To apply examples of coding practice and dynamic web site design using JavaScript and VBScript. CO4: To apply HTML, VBScript and JavaScript skills in practical. CO5: To Determine the appropriate use of HTML, VBScript and JavaScript

Attribute	Details
SLM Units (Block Pattern)	Block 1: Introducing HTML and CSS (12 Hrs) History of HTML, Attributes. Basics of HTML, Lists, The tag. Working with Links. Building Tables: Sizing, Borders, Cell color. Block 2: Introduction to CSS (12 Hrs) Designing Forms: Form Controls. Using CSS to Style a Site: Selectors, Color, Links. Formatting Text. Positioning Elements: Absolute, Fixed, Drop-Down Menus. Block 3: Introducing JavaScript (12 Hrs) Introducing JavaScript: Why Would You Want to Use JavaScript, The <script> tag, The JavaScript Language: Operators and Expressions, Variables, Control Structures, Functions, Data Types, Arrays, Objects, The JavaScript Environment, Events. Block 4: Introduction to VBScript (12 Hrs) Introduction to VBScript, Declaring and Using Variables, Operators, Operator Precedence & Constants, Conditional Statements, Loops: for, while, do...while, Procedures and Functions. Block 5: Introduction to Bootstrap (12 Hrs) Bootstrap Overview: History, Bootstrap Grid System, Mobile First Strategy, Typography, tables, Images, Jumbotron, BS Wells, BS Alerts, BS Buttons, BS Button Groups, BS Glyphicons, BS Badges/Labels, BS Progress Bars, BS Pagination, BS Pager, BS Dropdowns, BS Collapse, BS Tabs/Pills, Navigation Bars, Forms, BS Media Objects, BS Carousel, BS Modal, Modal Plugin, Tooltip, Popover, BS Scrollspy, BS Affix, BS Grid Stacked to Horizontal.

CO-PO Mapping Matrix

C O	P O 1	P O 2	P O 3	P O 4	P O 5	P O 6	P O 7	P O 8	P O 9	P O 10	P O 11	P O 12
C O 1	2	2	2	2	2	-	1	-	-	-	2	2
C O 2	2	2	3	3	3	-	2	-	-	1	2	3
C O 3	2	3	3	3	3	1	2	-	-	1	3	3
C O 4	2	3	3	3	3	1	3	-	-	2	3	3
C O 5	2	3	3	2	3	-	2	-	-	1	3	3

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	-	1	3	2
CO2	3	-	1	3	3
CO3	3	1	2	3	3
CO4	3	1	2	3	3
CO5	3	-	2	3	3

21. OLBCA33 - Operating Systems

Attribute	Details
Course Code & Name	OLBCA33 - Operating Systems
Credits	3 Credits
L-T-P-C	3-0-0-3
Course Objectives	• Understand the basic concepts and functions of modern operating systems. • Analyse and compare different CPU scheduling algorithms. • Explain memory management techniques and deadlock handling methods.
Course Outcomes	CO1: To relate the commands used to work in Linux environment. CO2: To compare the various scheduling algorithms. CO3: To identify the various types of file structures used in Operating systems. CO4: To apply OS and Linux skills in practical. CO5: To Determine the appropriate use of OS and Linux in real world.
SLM Units (Block Pattern)	Block 1: Introduction to Operating Systems (11 Hrs) OS Definition, Simple batch, Time-sharing, Real-time, System components. Process Management: Scheduling, Threads. Mobile OS, Cloud OS. Block 2: CPU Scheduling (11 Hrs) Pre-emptive and non-pre-emptive scheduling, FCFS, SJF Priority, Round robin, Multi-level Scheduling. Multicore Scheduling. Block 3: Memory Management (11 Hrs) Deadlocks: Prevention, Avoidance, Recovery. Memory Management: Logical and Physical Address Space, Swapping, Contiguous Allocation, Paging, Segmentation. Block 4: File Systems (12 Hrs) Virtual Memory: Demand Paging, Page Replacement Algorithms, Thrashing. File Systems: File Concept, Access Methods, Directory Structures, Allocation Methods. Linux Introduction, Directory commands, File Access Permissions, Process/Communication commands, Pipe and Filters. Basic scripting (Bash).
Reference Books	• Abraham Silberschartz and Peter Galvin, Operating System Concepts. • Andrew S Tanenbaum, Operating System Design and Implementation.



CO-PO Mapping Matrix

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	1	2	3	1	2	-	-	-	2	2
CO2	3	3	2	1	-	1	2	-	-	-	2	2
CO3	3	2	1	-	-	2	2	-	-	-	2	1
CO4	2	3	3	3	3	2	3	-	-	1	3	3
CO5	2	2	2	2	3	1	2	-	-	1	3	3

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	1	1	1	2
CO2	1	-	1	-	2
CO3	1	2	1	-	1
CO4	2	1	2	1	3
CO5	2	1	2	1	3

22. OLBCA34 - Customer Relationship Management

Attribute	Details
Course Code & Name	OLBCA34 - Customer Relationship Management
Credits	3 Credits
L-T-P-C	3-0-0-3
Course Objectives	- To introduce the foundational concepts of CRM, including its types. - To develop a strategic understanding of the customer lifecycle. - To provide a comprehensive overview of the technical aspects of CRM.

Attribute	Details
Course Outcomes	CO1: Define and differentiate between the types of CRM. CO2: Develop and analyze strategies for customer acquisition and retention. CO3: Apply customer portfolio management principles. CO4: Outline the complete process for implementing a CRM system. CO5: Evaluate the role of CRM in building long-term customer relationships and improving business performance.
SLM Units (Block Pattern)	Block 1: CRM Foundations and Customer Dynamics (11 Hrs) Introduction to CRM, Types of CRM. Customer Relationship Essentials. Customer Loyalty and Satisfaction. Block 2: Strategic CRM and Lifecycle Management (11 Hrs) Customer Lifecycle – Acquisition, Retention, Strategies to Reduce Churn. Strategic CRM and Customer Value. Customer Portfolio and Experience Management. Block 3: CRM Systems and Implementation (11 Hrs) Operational and Collaborative CRM. Analytical CRM and Data Management, Data Mining, Data Warehousing. CRM Implementation and Evaluation. Block 4: CRM Technology and Tools(12 Hrs) CRM software and applications, Customer database management ,Data mining and customer analytics, E-CRM (Electronic Customer Relationship Management), Social CRM and digital platforms.
Reference Books	- Buttle, F., & Maklan, S. (2019). Customer relationship management: Concepts and technologies. - Greenberg, P. (2010). CRM at the speed of light.

CO-PO Mapping Matrix

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	1	1	-	2	2	1	1	2	1	2	2
CO2	2	3	2	-	2	3	2	1	2	2	3	3
CO3	2	2	2	-	2	3	2	1	2	2	2	2
CO4	2	3	3	2	3	3	3	1	2	2	3	3
CO5	2	2	2	2	3	1	2	-	-	1	3	3

Registrar

REGISTRAR

SRINIVAS UNIVERSITY
MANGALORE



CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	1	1	2
CO2	1	2	1	1	3
CO3	1	2	1	1	3
CO4	2	3	2	1	3
CO5	2	1	2	1	3

23. OLBCA35 - Human Resources Management

Attribute	Details
Course Code & Name	OLBCA35 - Human Resources Management
Credits	3 Credits
L-T-P-C	3-0-0-3
Course Objectives	To familiarize students with the foundations, processes, and applications of Human Resource Management.
Course Outcomes	CO1: Recall and define key HRM concepts, theories, and terminology. CO2: Demonstrate an understanding of the impact of HRM on employee engagement. CO3: Apply HRM strategies to promote employee development. CO4: Assess the effectiveness of HRM strategies. CO5: Evaluate theories for achieving desired goals.
SLM Units (Block Pattern)	Block 1: Foundations of Human Resource Management (11 Hrs) Introduction to HRM, The Role of the HR Manager, The HR Department. Block 2: Acquisition of Human Resources (11 Hrs) Human Resource Planning, Job Analysis and Design, Recruitment and Selection, Employee Placement and Mobility. Block 3: Performance and Development (11 Hrs) Employee Induction and Training, Performance Appraisal and Competency Management. Block 4: Compensation and Employee Relations (12 Hrs) Compensation and Wage Administration, Incentives Management, Discipline and Grievance Handling.
Reference Books	(Note: Latest edition of Human Resource Management text books to be used).

CO-PO Mapping Matrix

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	1	-	-	-	-	-	1	1	1	2	2
CO2	1	2	-	-	-	1	1	1	2	2	2	2
CO3	1	2	-	-	1	1	1	1	2	2	2	2
CO4	1	2	1	-	1	1	1	2	2	2	2	2
CO5	1	2	1	-	1	1	1	1	2	2	2	2

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	-	-	-	-	2
CO2	-	-	1	-	2
CO3	-	-	1	-	2
CO4	-	-	1	-	2
CO5	1	-	1	-	3

24. OLBCA36 - Introduction to Big Data, Hadoop & Ecosystem

Attribute	Details
Course Code & Name	OLBCA36 - Introduction to Big Data, Hadoop & Ecosystem
Credits	2 Credits
L-T-P-C	2-0-0-2
Course Objectives	- To introduce the fundamental concepts of big data. - To familiarize students with Hadoop ecosystems.
Course Outcomes	CO1: Understand and classify various types of data and characteristics of big data. CO2: Differentiate between SQL and NoSQL databases. CO3: Understand Hadoop architecture.



Attribute	Details
	CO4: Analyze how Big Data technologies are used for storing, processing, and analyzing large datasets in organizations. CO5: Demonstrate awareness of real-world applications of Big Data and Hadoop in business, healthcare, finance, and other industries.
SLM Units (Block Pattern)	Block 1: The Big Data Problem and Hadoop Solution (10 Hrs) Introduction to Big Data (5 V's), Sources. Introduction to Hadoop, Distributed Computing, HDFS and MapReduce. Block 2: Hadoop Core Architecture (10 Hrs) HDFS: NameNode, DataNode. Blocks, Replication. MapReduce and YARN: Mappers, Reducers, ResourceManager. Block 3: The Hadoop Ecosystem (10 Hrs) Data Ingestion (Sqoop, Flume), HBase. Apache Hive (HiveQL), Apache Pig. Cluster Management (Zookeeper, Oozie). Introduction to Spark, Kafka.
Reference Books	• Big Data and Analytics by Seema Acharya, Wiley. • Big Data Analytics – A Hands-On Approach by Arshdeep Bahga.

CO-PO Mapping Matrix

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	1	-	2	3	1	-	-	-	2	2
CO2	2	2	2	1	3	3	2	-	-	-	3	2
CO3	3	3	3	2	3	3	3	-	-	1	3	3
CO4	1	2	1	-	1	1	1	2	2	2	2	2
CO5	1	2	1	-	1	1	1	1	2	2	2	2

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	3	1	1	2
CO2	2	3	1	1	3
CO3	3	3	2	2	3



CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO4	-	-	1	-	2
CO5	1	-	1	-	3

25. OLBCA37 - Introduction to Machine Learning

Attribute	Details
Course Code & Name	OLBCA37 - Introduction to Machine Learning
Credits	3 Credits
L-T-P-C	3-0-0-3
Course Objectives	- To understand ML basics and Python tools. - To Learn core regression, classification, clustering methods. - To Learn model evaluation and basics of neural networks.
Course Outcomes	CO1: Understanding of Core Concepts. CO2: Practical Application of Machine Learning. CO3: Evaluation and Selection. CO4: Feature Engineering and Preprocessing. CO5: Ethical Considerations and Bias Awareness.
SLM Units (Block Pattern)	Block 1: Introduction to Machine Learning (11 Hrs) Overview, Types of machine learning. Fundamentals of Python for ML: NumPy, Pandas, Matplotlib. Block 2: Supervised Learning (11 Hrs) Regression: Linear, Polynomial, Evaluation metrics. Classification: Logistic regression, Decision trees, Random Forests, SVM. Block 3: Unsupervised Learning (11 Hrs) Clustering: K-means, Hierarchical. Dimensionality Reduction: PCA, t-SNE. Block 4: Model Evaluation and Validation (12 Hrs) Cross-validation, Bias-variance tradeoff, Hyperparameter tuning. Model Deployment.
Reference Books	“Introduction to Machine Learning” by Ethem Alpaydin. “Pattern Recognition and Machine Learning” by Christopher M. Bishop.

CO-PO Mapping Matrix

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	1	2	2	3	1	-	-	-	2	2
CO2	3	3	3	3	3	3	2	-	-	1	3	3

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO2												
CO3	3	3	3	3	3	3	2	-	-	1	3	2
CO4	3	3	2	3	3	3	2	-	-	-	2	2
CO5	2	2	2	1	1	2	2	3	-	-	2	2

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	3	1	1	2
CO2	3	3	2	2	3
CO3	2	3	2	1	3
CO4	2	3	2	1	3
CO5	1	2	1	1	3

26. OLBCA38 - Google Cloud Basics

Attribute	Details
Course Code & Name	OLBCA38 - Google Cloud Basics
Credits	2 Credits
L-T-P-C	2-0-0-2
Course Objectives	• Understand cloud computing models and Google Cloud foundations. • Learn core compute, storage, and database services.
Course Outcomes	CO1: To relate the various concepts of cloud computing techniques. CO2: To identify the structure of Google Cloud Platform. CO3: To explain cloud Storage systems and Databases. CO4: To analyze the benefits of cloud computing including scalability, cost efficiency, and flexibility for businesses. CO5: Apply basic cloud security practices and resource management while working with Google Cloud services.

Attribute	Details
SLM Units (Block Pattern)	Block 1: Google Cloud Foundations (10 Hrs) Introduction to Cloud Computing (IaaS, PaaS, SaaS). Google Cloud Fundamentals (Regions, Zones). Identity and Security (IAM). Block 2: Core Infrastructure Services (10 Hrs) Compute Services: Virtual Machines, GKE, Serverless. Storage Services: Cloud Storage, Persistent Disks. Networking: VPC Basics, Load Balancing. Block 3: Data, Databases, and Managed Services (10 Hrs) Database Services: Cloud SQL, Spanner, NoSQL. Big Data and AI Basics: BigQuery, Pub/Sub, Vertex AI.
Reference Books	(Note: Latest edition of Google Cloud Basics text books to be used).

CO-PO Mapping Matrix

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	1	1	-	2	-	2	-	-	-	2	2
CO2	2	2	2	1	3	1	2	-	-	-	2	2
CO3	2	2	2	1	3	3	2	-	-	-	3	3
CO4	3	3	2	3	3	3	2	-	-	-	2	2
CO5	2	2	2	1	1	2	2	3	-	-	2	2

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	1	2	2
CO2	2	1	2	2	2
CO3	2	3	2	2	3
CO4	2	3	2	1	3
CO5	1	2	1	1	3



27. OLBCA39 - Constitution of India

Attribute	Details
Course Code & Name	OLBCA39 - Constitution of India
Credits	2 Credits
L-T-P-C	2-0-0-2
Course Objectives	- To realize the significance of the constitution of India. - To understand the functioning of Union, State and Local Governments.
Course Outcomes	CO1: Recall the meaning and importance of Constitution. CO2: Explain about making of Indian Constitution. CO3: Describe the Salient features of Indian Constitution. CO4: Analyze the functions of the three organs of government – Legislature, Executive, and Judiciary. CO5: Develop awareness of constitutional values, democratic principles, and the rights and responsibilities of citizens.
SLM Units (Block Pattern)	Block 1: Indian Constitution (10 Hrs) Government of India Act of 1935, Constituent Assembly. Indian Federalism: Structure and Features. Block 2: Union Government (10 Hrs) Powers of Indian Parliament, Rajya Sabha, Lok Sabha, Powers of the President and Prime Minister. Block 3: Challenges to Indian Political System (10 Hrs) Caste issues, Mandal Commission. India's External Relations: Foreign Policy, Cold War.
Reference Books	G. Austin (2004) Working of a Democratic Constitution of India. - Basu, D.D (2005), An Introduction to the Constitution of India.

CO-PO Mapping Matrix

C O	P O 1	P O 2	P O 3	P O 4	P O 5	P O 6	P O 7	P O 8	P O 9	P O 10	P O 11	P O 12
CO 1	-	-	-	-	-	-	-	2	-	-	1	1
CO 2	-	-	-	-	-	-	-	2	-	-	1	1
CO 3	-	-	-	-	-	-	-	2	-	-	1	1
CO 4	3	3	2	3	3	3	2	-	-	-	2	2

C O	P O 1	P O 2	P O 3	P O 4	P O 5	P O 6	P O 7	P O 8	P O 9	P O 10	P O 11	P O 12
C O 5	2	2	2	1	1	2	2	3	-	-	2	2

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	-	-	-	-	1
CO2	-	-	-	-	1
CO3	-	-	-	-	1
CO4	2	3	2	1	3
CO5	1	2	1	1	3



SEMESTER IV

28. OLBCA41 - Programming in Core Java

Attribute	Details
Course Code & Name	OLBCA41 - Programming in Core Java
Credits	4 Credits
L-T-P-C	3-0-2-4
Course Objectives	- To understand the fundamentals of Java programming. - To implement decision-making, branching and looping. - To work with advanced Java concepts such as inheritance, interfaces, packages, multithreading.
Course Outcomes	CO1: To recall basic concepts of OOPs and work with JAVA. CO2: To illustrate programming skills require to solve problems in JAVA. CO3: To build small interactive java applications. CO4: To apply Java skills in practical to develop different types of applications. CO5: To Determine the appropriate use of Java in real world.
SLM Units (Block Pattern)	Block 1: Introduction (12 Hrs) Features, platform independent, JVM, Command line Parameters, Java Variables and Arrays, Operators. Block 2: Decision Making, Branching and Inheritance (12 Hrs) if-else, switch, loops. Classes, Objects, Constructors, Methods Overloading. Inheritance: Method overriding, Abstract methods, access modifiers. Arrays, Strings and Vectors. Block 3: Interfaces and Packaging (12 Hrs) Interfaces: Defining, extending, implementing. Packaging: Java API packages, creating packages, hiding classes. Block 4: Multi-threads Programming (12 Hrs) Java thread Model, Creating Threads, Thread priority, synchronization, runnable interface. Exception Handling: Try-catch-finally. Block 5: Applet, Swing and JDBC (12 Hrs) Applets, I/O streams, File handling. Swing: Components, Layout Managers. JDBC: Connectivity with MySQL, Statement, ResultSet.
Reference Books	- Balaguruswamy, Programming with Java - A PRIMER. - Cay S. Horstmann, Core Java Volume 1.

CO-PO Mapping Matrix

C O	P O 1	P O 2	P O 3	P O 4	P O 5	P O 6	P O 7	P O 8	P O 9	P O 10	P O 11	P O 12
C O 1	3	2	2	3	1	-	2	-	-	-	2	2

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO2	3	3	3	3	2	-	2	-	-	-	2	3
CO3	2	3	3	3	3	2	3	-	-	1	3	3
CO4	2	3	3	3	3	2	3	-	-	2	3	3
CO5	2	3	3	3	3	2	3	-	-	2	3	3

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	2	1	2
CO2	3	1	2	2	3
CO3	3	2	3	2	3
CO4	3	2	3	2	3
CO5	3	2	3	2	3

29. OLBCA42 - Introduction to Dev Ops

Attribute	Details
Course Code & Name	OLBCA42 - Introduction to Dev Ops
Credits	4 Credits
L-T-P-C	3-0-2-4
Course Objectives	• Learn the basics of DevOps, principles, and shift from traditional to Agile practices. • Understand automation, monitoring, metrics, and teamwork in DevOps.
Course Outcomes	CO1: To Understand the basics of DevOps. CO2: To understand the traditional approach of the Agile approach. CO3: To understand the embedded developments. CO4: To deal with the process view. CO5: To understand the technical view.



Attribute	Details
SLM Units (Block Pattern)	Block 1: Fundamentals of DevOps (12 Hrs) Definition, Agile vs DevOps, Roles, DevOps to the Rescue, Values, Goals, Tools. Block 2: Building Block of DevOps (12 Hrs) Metrics, Definition of Done, Accelerate Delivery, Pitfalls of automation, Dark Launching. Block 3: Metrics and Measurement View (12 Hrs) Quality and Testing, Test Automation Mix, Shared Incentives, Stand-Ups, Embracing Change. Block 4: Process View (12 Hrs) Gain Fast Feedback, Embedded Development/Operations, Kanban board, Unified Holistic Approach. Block 5: Technical View (12 Hrs) Automatic Releasing, Infrastructure as Code, Test Environments with Vagrant, Provisioning with Puppet.
Reference Books	• DevOps for Developers by Michael Huttermann. • The DevOps Handbook by Gene Kim, Jez Humble.

CO-PO Mapping Matrix

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO 1	2	2	2	1	3	-	3	1	2	2	3	2
CO 2	2	2	2	1	3	-	3	1	2	2	2	2
CO 3	2	2	3	2	3	-	3	-	2	2	3	2
CO 4	2	2	3	1	3	-	3	-	2	3	3	2
CO 5	2	3	3	3	3	-	3	-	2	2	3	3

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	-	3	2	3
CO2	1	-	3	1	2

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO3	2	-	3	2	3
CO4	2	-	3	1	3
CO5	3	1	3	3	3

30. OLBCA43 - E-Commerce

Attribute	Details
Course Code & Name	OLBCA43 - E-Commerce
Credits	3 Credits
L-T-P-C	3-0-0-3
Course Objectives	- To provide a comprehensive understanding of E-Commerce frameworks and infrastructure. - To introduce digital marketing and security concepts.
Course Outcomes	CO1: To recall the major types of E-commerce. CO2: To demonstrate the various types of network infrastructure. CO3: To identify the challenges in implementing security features in e-commerce. CO4: To apply E-commerce skills in practical to develop applications. CO5: To Determine the appropriate use of E-commerce in real world.
SLM Units (Block Pattern)	Block 1: Introduction to Electronic Commerce (11 Hrs) Meaning, benefits, classification, E-Commerce Business models. Block 2: Electronic Data Interchange (11 Hrs) EDI meaning, architecture, Electronic Payment System (prepaid, postpaid, eCash). Block 3: Network Protocol (11 Hrs) Network infrastructure: LAN, WAN, TCP/IP, Domain Name systems. Information distribution: FTP, HTTP, Web Servers. Block 4: Securing the business on Internet (12 Hrs) Vulnerability, security policy, Denial of service, Sniffing, Spoofing and Firewalls..
Reference Books	C. S. V. Murthy, E-commerce: Concepts, Models, Strategies. - Bharat Bhaskar, Electronic Commerce: Framework, Technologies and Applications.

CO-PO Mapping Matrix

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	1	1	-	1	-	2	1	1	-	2	3

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO2	3	2	2	1	2	-	2	1	1	-	2	2
CO3	2	3	2	1	2	1	3	2	1	-	3	2
CO4	2	3	3	3	3	2	3	1	2	1	3	3
CO5	2	2	3	2	3	1	3	1	2	1	3	3

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	-	1	2	2
CO2	2	1	2	3	2
CO3	2	2	2	3	3
CO4	3	2	2	3	3
CO5	3	2	2	3	3

31. OLBCA44 - Introduction to Robotics

Attribute	Details
Course Code & Name	OLBCA44 - Introduction to Robotics
Credits	3 Credits
L-T-P-C	3-0-0-3
Course Objectives	- To understand the fundamentals of robotics and its components. - To explore sensor technologies, perception, control, and motion planning.
Course Outcomes	CO1: Understand the Robotics Fundamentals. CO2: Exploring Robot Design and Architecture. CO3: Analysing Robot Perception and Sensing. CO4: Robot Motion Planning and Control. CO5: Understanding Human-Robot Interaction.
	Block 1: Introduction to Robotics (11 Hrs) Fundamentals, components (actuators, sensors). Robot Kinematics and Dynamics <i>(forward/inverse kinematics)</i>

Attribute	Details
SLM Units (Block Pattern)	Block 2: Robot Perception and Sensing (11 Hrs) Sensors, SLAM algorithms. Computer Vision: Camera calibration, object detection, tracking. Block 3: Robot Control and Programming (11 Hrs) Open-loop vs closed-loop, PID control. Robot Programming (Python, ROS). Block 4: Robot Motion Planning and Navigation (12 Hrs) Motion planning, Obstacle avoidance, Localization (Kalman filters).
Reference Books	• “Introduction to Robotics: Mechanics and Control” by John J. Craig. • “Robotics: Modelling, Planning and Control” by Bruno Siciliano.

CO-PO Mapping Matrix

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	1	1	1	1	2	-	-	-	2	1
CO2	3	3	3	2	2	2	3	-	-	-	2	2
CO3	3	3	3	2	3	3	3	-	-	-	3	2
CO4	3	3	3	3	3	2	3	-	-	1	3	2
CO5	2	2	3	2	2	1	2	2	1	1	2	3

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	-	1	-	1
CO2	2	-	2	-	2
CO3	2	2	2	1	2
CO4	3	1	2	1	3
CO5	2	1	2	1	3



32. OLBCA45 - Neural Networks

Attribute	Details
Course Code & Name	OLBCA45 - Neural Networks
Credits	4 Credits
L-T-P-C	3-0-2-4
Course Objectives	- To understand the basics of Neural Networks. - To study single and multi-layer feed-forward networks, BAM architecture.
Course Outcomes	CO1: To differentiate the human and artificial brain. CO2: To work on artificial Neurons. CO3: To work on various layers of the Neurons. CO4: To work on pattern mathematics. CO5: To work on BAM architecture and algorithm.
SLM Units (Block Pattern)	Block 1: Introduction to Neural Network (12 Hrs) Biological Neuron, Artificial Neuron Models, McCulloch-Pitts Model. Block 2: Essentials of Artificial Neural Network (12 Hrs) Activation Function, ANN Architectures, Learning Strategy (Supervised, Unsupervised, Reinforcement), Learning Rules. Block 3: Single layered Feed-Forward Networks (12 Hrs) Perceptron Models, Training Algorithms, Limitations. Block 4: Multi layered Feed-Forward Networks (12 Hrs) Credit Assignment Problem, Generalized Delta Rule, Backpropagation Algorithm, Kolmogorov Theorem. Block 5: Associative Memories (12 Hrs) Hebbian Learning, Bidirectional Associative Memory (BAM) Architecture, BAM Training Algorithms.
Reference Books	- Laurene Fausett, "Fundamentals of Neural Networks". S. N. Sivanandam, "Introduction to Neural Networks using MATLAB 6.0".

CO-PO Mapping Matrix

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	1	1	-	-	1	1	-	-	-	2	1
CO2	3	3	2	2	2	2	2	-	-	-	2	2
CO3	3	3	3	2	3	2	3	-	-	-	3	2

C O	P O 1	P O 2	P O 3	P O 4	P O 5	P O 6	P O 7	P O 8	P O 9	P O 10	P O 11	P O 12
C O 4	3	3	3	2	2	3	2	-	-	-	2	2
C O 5	3	3	3	3	3	2	3	-	-	-	3	2

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	-	1	-	1
CO2	2	-	1	-	2
CO3	2	1	2	-	2
CO4	2	2	2	1	2
CO5	3	1	2	1	3

Attribute	Details
Course Code & Name	OLBCA46 - Introduction to Ethical Hacking
Credits	2 Credits
L-T-P-C	2-0-0-2
Course Objectives	• Understand ethical hacking fundamentals, scope, methodologies. • Analyze cyberattacks like DoS/DDoS, SQL injection, cryptography.
Course Outcomes	CO1: To understand the fundamentals of ethical hacking and hacking techniques. CO2: To explain DoS, DDoS attacks, and session hijacking. CO3: To identify SQL injection, wireless networking vulnerabilities. CO4: To analyze buffer overflow, file signature analysis. CO5: To understand the key provisions of the IT Act 2008.
SLM Units (Block Pattern)	Block 1: Introduction to Ethical Hacking (10 Hrs) Overview, Scopes, Legal Boundaries, Skills Required, Phases of Hacking, Types of Hackers. Block 2: DoS and DDoS Attacks, Sniffers, Session Hijacking (10 Hrs) DoS/DDoS Attacks, Incident Response, Sniffers (Passive/Active), Session Hijacking.



Attribute	Details
	Block 3: SQL Injection, Wireless Networking, IDS (10 Hrs) SQL Injection Attacks, Wireless Network Standards, Encryption, Intrusion Detection Systems (NIDS/HIDS).
Reference Books	• Gray Hat Hacking: The Ethical Hacker's Handbook. • CEH v9: Certified Ethical Hacker Version 9 Study Guide.

CO-PO Mapping Matrix

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	1	1	2	1	2	3	-	-	2	2
CO2	2	3	2	1	2	1	3	2	-	-	2	2
CO3	3	3	3	2	3	2	3	2	-	-	3	3
CO4	3	3	3	2	3	2	3	2	-	-	3	3
CO5	1	1	-	-	-	-	1	3	1	-	2	2

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	1	2	3
CO2	1	1	2	2	3
CO3	2	2	3	3	3
CO4	2	1	3	2	3
CO5	-	-	1	-	3



34. OLBCA47 - Fundamentals of Data Virtualization

Attribute	Details
Course Code & Name	OLBCA47 - Fundamentals of Data Virtualization
Credits	3 Credits
L-T-P-C	2-1-0-3
Course Objectives	- Understand the basics of Data Virtualization and its BI applications. - Integrate data from multiple sources, caching and optimization.
Course Outcomes	CO1: To Understand the basics of Data Virtualization. CO2: To understand the Data Virtualization Server. CO3: To implement Data Virtualization in Business Intelligent systems. CO4: To deal with the various data systems for the Business. CO5: To understand the Data Virtualization server architecture.
SLM Units (Block Pattern)	Block 1: Introduction to Data Virtualization (11 Hrs) Data Virtualization concepts, Business Intelligence and Data Warehousing, Normalized/Star/Snowflake schemas. Block 2: Data Virtualization Server (11 Hrs) Server Architecture, defining wrappers, Virtual Tables, Security, Lineage analysis. Block 3: Caching of virtual tables (11 Hrs) Caching, caches vs data marts, Query Optimization techniques, Pushdown, Ship joins. Block 4: Deploying DV in Business Intelligence System (12 Hrs) BI System based on DV, Design Guidelines, Data quality, Joining Historical and Operational Data.
Reference Books	- Data Virtualization for Business Intelligence Systems by Morgan Kaufman. - Data Virtualization Going Beyond Traditional Data Integration by Judith R. Davis.

CO-PO Mapping Matrix

C O	P O 1	P O 2	P O 3	P O 4	P O 5	P O 6	P O 7	P O 8	P O 9	P O 10	P O 11	P O 12
CO1	2	2	1	-	2	3	2	-	-	-	2	2
CO2	2	2	3	1	3	3	2	-	-	-	2	2
CO3	2	3	3	2	3	3	3	-	-	1	3	3
CO4	2	3	2	1	3	3	3	-	-	-	2	3

C O	P O 1	P O 2	P O 3	P O 4	P O 5	P O 6	P O 7	P O 8	P O 9	P O 10	P O 11	P O 12
C O 5	2	3	3	1	3	3	3	-	-	-	3	3

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	3	1	1	2
CO2	2	3	2	1	2
CO3	2	3	2	2	3
CO4	1	3	1	2	3
CO5	2	3	2	2	2



SEMESTER V

35. OLBCA51 - Web Application Using MERN stack

Attribute	Details
Course Code & Name	OLBCA51 - Web Application Using MERN stack (Core- Major)
Credits	4 Credits
L-T-P-C	3-0-2-4
Course Objectives	• Understand and implement the core components of the MERN stack. • Design and manage NoSQL databases with MongoDB. • Develop RESTful APIs using Node.js and Express.js. • Create dynamic and responsive front-end interfaces using React.js. • Integrate front-end and back-end components to build complete full-stack web applications.
Course Outcomes	CO1: Students will be able to build RESTful applications practices. CO2: Students will be able to design and manage CRUD operations. CO3: Students will be able to develop secure CO4: Students will be able to develop and hooks. CO5: Students will be able to integrate using JWT authentication.
SLM Units (Block Pattern)	Block 1: Introduction to MERN (12 Hrs) Overview of MERN Stack: Introduction to the MERN Stack, Benefits of using the MERN Stack, Overview of each component: MongoDB, Express.js, React.js, Node.js, Comparison with other stacks (MEAN, LAMP), Setting up the development environment, Introduction to package managers (npm, yarn), First MERN stack project structure, Version control with Git and GitHub. Getting Started with Node.js and Express.js: Introduction to Node.js and its event-driven architecture, Installation and setup of Node.js, Basics of the Node.js runtime environment, Building a simple server with Express.js, Middleware in Express.js, Routing basics in Express.js, Handling HTTP methods (GET, POST, PUT, DELETE), Introduction to RESTful services. Block 2: MongoDB and Data Modeling (12 Hrs) Introduction to MongoDB: Understanding NoSQL databases, Installation and setup of MongoDB, Basic CRUD operations in MongoDB, Working with MongoDB shell and Compass, Connecting MongoDB with Node.js using Mongoose, Indexing and performance optimization, Data replication and sharding. Data Modeling and Mongoose: Introduction to Mongoose and its benefits, Defining schemas and data models Mongoose schema types and validation, Using Mongoose middleware (pre and post hooks), Creating and managing relationships in MongoDB, Querying and populating documents, Error handling in Mongoose Advanced Mongoose features (plugins, virtual). Block 3: Building RESTful APIs (12 Hrs) Creating APIs with Express.js: Introduction to RESTful principles, Setting up a RESTful API with Express.js CRUD operations in RESTful APIs, Route parameters and query strings, Error handling and logging, Using Postman for API testing. Securing APIs: Introduction to API security, Authentication using JSON Web Tokens (JWT), Authorization and role-based access control, Implementing middleware for protected routes, Best practices for storing and managing passwords, Preventing common security threats (SQL Injection, XSS, CSRF), Setting up HTTPS and SSL/TLS, API security best practices. Block 4: Introduction to React.js (12 Hrs) Basics of React.js: Introduction to React and its core concepts, Setting up a React development environment, Creating and rendering React components, JSX syntax and expressions, Managing state and props in React, Handling events in React, Conditional rendering and lists, Introduction to React Developer Tools, Advanced React Concepts: React hooks: use State and use Effect, Creating custom hooks, Managing state with Context

Attribute	Details
	API, Implementing React Router for navigation, Higher-order components and render props, Optimizing performance with React. memo and use Callback, Error boundaries and handling exceptions. Block 5: Integrating Frontend and Backend (12 Hrs) Connecting React with Express APIs: Introduction to client-server architecture, Making HTTP requests from React using Axios, Fetching data and updating state, Managing loading states and error handling, Using React hooks for data fetching, Displaying dynamic content in React, Form handling and submission in React, Introduction to CORS and configuring it in Express.js. Implementing Authentication: User authentication flow overview, Implementing signup and login functionality, Storing and managing JWT tokens in React, Creating protected routes in React, Managing user sessions and local storage, Handling token expiration and refresh tokens, Implementing logout functionality, Best practices for secure authentication.
Reference Books	• “Pro MERN Stack: Full Stack Web App Development with Mongo, Express, React, and Node” by Vasan Subramanian • “Web Development with Node and Express: Leveraging the JavaScript Stack” by Ethan Brown • “Full-Stack React Projects” by Shama Hoque

CO-PO Mapping Matrix

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	3	3	3	-	2	-	-	-	2	2
CO2	2	2	3	3	3	3	2	-	-	-	2	2
CO3	1	2	3	3	3	-	2	2	-	-	2	2
CO4	2	2	3	3	3	-	2	-	-	-	2	2
CO5	1	2	3	3	3	-	2	2	-	-	2	2

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	2	3	2
CO2	2	3	2	2	2
CO3	3	1	3	3	2



CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO4	3	-	2	3	2
CO5	3	1	2	3	2

36. OLBCA52 - LAMP Technology

Attribute	Details
Course Code & Name	OLBCA52 - LAMP Technology (Core-Major)
Credits	4 Credits
L-T-P-C	3-0-2-4
Course Objectives	• Provide a strong foundation in Linux operating system concepts, architecture, process control, file systems, and security. • Enable students to install, configure, and manage the Apache web server, including virtual hosting, security features, and performance tuning. • Familiarize students with HTML/XHTML and HTTP basics and integrate PHP for server-side scripting and dynamic content generation. • Teach MySQL database installation, configuration, administration, and efficient handling of database operations using command-line and GUI tools. • Develop proficiency in PHP programming including variables, control structures, functions, arrays, file handling, sessions, cookies, and object-oriented features. • Integrate PHP with MySQL to perform CRUD (Create, Read, Update, Delete) operations and build dynamic web applications. • Emphasize web application security, error handling, logging, and server optimization.
Course Outcomes	CO1: Students will be able to manage Linux systems by handling users, processes, files, and permissions. CO2: Students will be able to configure and secure Apache web servers with virtual hosting and SSL. CO3: Students will be able to develop dynamic web applications using PHP and MySQL. CO4: Students will be able to configure PHP environments and develop secure applications. CO5: Students will be able to build complete PHP-based web applications using database operations.
SLM Units (Block Pattern)	Block 1: Linux Operating System (12 Hrs) Linux Operating System Concepts and Architecture; Overview of the Linux Kernel, User Space, Kernel Space; Processes and Daemons, Process Control; Overview of Linux Administration; Linux File system, User, Group and Resource Management; Configuration Files Overview; Access Permission and Security. Block 2: Apache Web Server (12 Hrs) Linux distribution Apache Installation; Starting and stopping Web Server Configuration files; Apache Directives-Server Configuration, Directory level configuration: ht Apache access and , Access Control, URL Pathnames, MIME types, CGI files, Automatic directory Indexing, Authentication, Log files; Virtual Hosting-IP Address Virtual Host, Name Based Virtual Host, Dynamic Virtual Hosting; Server Side includes; Apache GUI Configuration Tools, Web Server Security-SSL; Apache Web Server Configuration files. Block 3: HTML/XHTML (12 Hrs) HTML/XHTML and HTTP: basics review, PHP and the webserver Architecture model, Overview of PHP capabilities, CGIvs. Shared Object Model, PHP HTML Embedding Tags and Syntax, simple PHP script example; PHP and HTTP environment variables MYSQL Database Server: Installation- precompiled packages, post installed configuration, post installed troubleshooting; MySQL Administration; Commands myisamchk, mysql,


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Attribute	Details
	mysqladmin, mysqlbug, mysqlimport, mysqlshow; Creating users and granting them permissions; Creating databases; Data types; Creating a table; Graphical tools. Phpmyadmin. Block 4: PHP Programming (12 Hrs) PHP: Obtaining, Installing and configuring PHP; obtaining PHP Sourcecode; Installing PHP from Binary Packages PHP and security considerations; PHP configuration parameters and the php.ini File; Language Options, Register Globals and Security Resource limits parameters, Error Handling and Logging parameters; Data handling parameters, Paths and Directories, Dynamic Extensions, Checking install with phpinfo function. PHP Language core: Variables, Constants and Data types, and Operators; Decision making, Flow control and loops; Arrays and Array operations, Two dimensional and multi- dimensional arrays, Strings and strings operations. Block 5: Database Operation With PHP (12 Hrs) PHP Functions, Function Declaration and parameter passing; Outputting data, include and require statements; file and Directory Access Operation; Error Handling and Reporting Considerations; Processing HTML Form Input from the User; Creating a Dynamic HTML Form with PHP; Login and Authenticating Users; Using GET, POST SESSION and COOKIES variable; Session management and Variables; Working with Cookies, Sending Emails Object Oriented PHP: Classes and Constructors Database Operation With PHP: Built-in Database Function, Connecting to a MySQL Database; Selecting a Database, Building and Sending the Query to Database; Engine, Retrieving Results Retrieving, Updating and Inserting Data; Sample Database Routines and Code Segments, Logging Database; Operations for Troubleshooting.
Reference Books	• Lee, OpenSource Development with LAMP: Using Linux, Apache, MySQL, Perl and PHP, Pearson Education, 2006 • Timothy Boronczyk, et al, Beginning PHP6, Apache, MySQL Web Development, Wiley India Pvt Ltd, 2009 • Julie C Meloni, Teach Yourself PHP, MySQL and Apache All-in-One, SAMS, 2008 • W. Jason Gilmore, Beginning PHP and MySQL: From Novice to Professional, 4th Edition, Apress, 2010 • Aleksa Vukotic, James Goodwill, Apache Tomcat 7, Apress, 2011 • Richard Petersen, Linux Complete Reference, 6th Edition, Tata McGraw Hill Education Private Limited

CO-PO Mapping Matrix

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO 1	2	2	2	1	3	-	2	-	-	-	2	1
CO 2	2	2	2	1	3	-	2	2	-	-	2	2
CO 3	2	3	3	3	3	3	2	-	-	-	2	2
CO 4	2	2	3	3	3	1	2	2	-	-	2	2

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO5	2	3	3	3	3	3	3	-	-	1	2	3

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	2	2	2
CO2	1	-	2	3	2
CO3	3	3	2	3	2
CO4	2	1	2	3	2
CO5	3	3	2	3	3

37. OLBCA57 - Design Thinking & Agile Methodologies.

Attribute	Details
Course Code & Name	OLBCA57 - Design Thinking & Agile Methodologies. (SEC)
Credits	2 Credits
L-T-P-C	2-0-0-2
Course Objectives	• To understand the principles and phases of Design Thinking. • To foster a user-centric approach to problem solving. • To learn Agile methodologies and frameworks. • To apply Scrum practices in software development. • To integrate Design Thinking with Agile delivery.
Course Outcomes	CO1: Explain the Design Thinking process and its significance. CO2: Apply empathy and ideation techniques to solve user problems. CO3: Understand Agile principles and the Agile manifesto. CO4: Implement Scrum framework and manage sprints. CO5: Combine Design Thinking for innovation with Agile for execution.
SLM Units (Block Pattern)	Block 1: Introduction to Design Thinking (10 Hrs) Principles of Design Thinking, the 5 phases: Empathize, Define, Ideate, Prototype, Test. User research, creating personas, empathy maps, brainstorming techniques, prototyping basics. Block 3: Introduction to Agile (10 Hrs) Traditional vs. Agile approaches, Agile manifesto, principles, benefits, and challenges. Scrum roles, artifacts, events (Sprint, Daily Standup, Review, Retrospective), writing user stories.

Attribute	Details
	Block 3: Integrating Design Thinking and Agile (10 Hrs) Continuous discovery and continuous delivery, Lean UX, balancing innovation with execution.
Reference Books	• “Change by Design” by Tim Brown • “Scrum: The Art of Doing Twice the Work in Half the Time” by Jeff Sutherland

CO-PO Mapping Matrix

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	3	3	-	-	1	2	1	2	2	2	2
CO2	1	3	3	-	1	2	2	2	3	3	2	3
CO3	1	2	2	1	2	-	3	1	2	3	2	2
CO4	1	2	2	2	3	-	3	2	3	3	2	3
CO5	1	3	3	2	2	1	3	2	3	3	3	3

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	-	2	1	2
CO2	2	-	3	2	3
CO3	1	-	3	1	2
CO4	2	-	3	1	3
CO5	2	-	3	2	3

ELECTIVES

39. OLBCA53,54,44,58 - Mobile Application Development

Attribute	Details
Course Code & Name	OLBCA53,54,44,56 - Mobile Application Development (Elective)
Credits	3 Credits
L-T-P-C	3-0-0-3
Course Objectives	• Understand the Fundamentals of Mobile Development Ecosystems • Explore the Building Blocks and Architecture of HMAD • Analyze Internal Operations and Data Handling in HMAD • Design Responsive UI and Integrate Device Features in HMAD • Deploy Applications and Integrate Third-party Services in HMAD
Course Outcomes	CO1: Students will be able to understand mobile development ecosystems and challenges. CO2: Students will be able to design and deploy hybrid mobile applications. CO3: Students will be able to analyze hybrid application internals and debugging tools. CO4: Students will be able to develop responsive hybrid mobile interfaces with device integration. CO5: Students will be able to integrate third-party services and deploy mobile applications.
SLM Units (Block Pattern)	Block 1: Introduction to Mobile Development (11 Hrs) Introduction to Mobile Development Ecosystems: History, Understanding Ecosystem, Website and Webviews for mobile devices, Adding Javascript to the mix, Hybrid application framework, Challenges by Mobile Application Layers, System software, Mobile application Testing. Native Vs Hybrid Mobile Application Development: Native Mobile Application Development, Hybrid Mobile Application Development. Block 2: Building Blocks of HMAD (11 Hrs) Building Blocks of HMAD: Architecture, How Hybrid Applications work, Technologies, Frameworks and Languages, Server side support, Server oriented Architecture, HMAD Development and Packaging Framework, Testing Mobile Applications, Deploying Applications. Create Your Application: Choosing a packaging platform, Setting up an Appbuilder account, Authoring a basic service returning JSON, Writing a code snippet based on HTML5, Injecting a jQuery into the code, Testing the Hybrid Application UI and code by Using a browser, Packaging an Application for the first time Using AppBuilder, Running Local test on the device. Block 3: HMAD internals (11 Hrs) HMAD internals: Mobile devices, How do applications Work on Devices? Comparison Native Vs Hybrid Applications. Data Access in HMAD: Exploring the Data access possibilities, Data serialization technique, Tips to GET or SET data, Browser based Debug, Monitor, and Trace, Code and Data Security. Block 4: UI for HMAD (12 Hrs) UI for HMAD: HTML with jQuery, Miscellaneous libraries, and plugins, Responsive UI. Using Device Features in HMAD: Geolocation services, I/O Operations, Access and use a Device-based camera, Access an Unique ID, Building offline Applications, Common issues and solutions, How to Advertise with HMAD: Current market trends, Add Frameworks, Using the Admob Framework.
Reference Books	• Beginning Hybrid Mobile Application Development by Mahesh Panhale Apress, 2016 • Professional Mobile Application Development By Jeff McWherter, Scott Gowell, Wiley Publications 2012 • Learning Mobile App Development A Hands-on Guide to Building Apps with IOS and Android by Jakob Iversen, Michael Eierman, Pearson Education, 2013

CO-PO Mapping Matrix

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	2	1	2	-	2	-	-	-	2	2
CO2	2	3	3	3	3	1	3	-	-	1	3	3
CO3	2	3	2	2	3	1	2	-	-	-	2	2
CO4	2	3	3	3	3	2	3	-	1	1	3	3
CO5	2	2	3	3	3	1	3	1	1	1	3	3

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	-	2	2	2
CO2	3	1	3	3	3
CO3	2	1	2	2	2
CO4	3	2	3	3	3
CO5	3	1	3	3	3

40. OLBCA53,54,44,59 - Applied Storage and Network Security

Attribute	Details
Course Code & Name	OLBCA53,54,55,56 - Applied Storage and Network Security (Elective)
Credits	3 Credits
L-T-P-C	3-0-0-3
Course Objectives	- To understand the fundamentals of data storage and management. - To explore the architecture and environment of storage systems. - To examine RAID techniques and networking technologies. - To implement effective backup, replication, and recovery strategies.



Attribute	Details
	To ensure data and network security using modern encryption and VPN methods.
Course Outcomes	CO1: Students will be able to apply storage management and ILM principles. CO2: Students will be able to analyze storage system components and performance metrics. CO3: Students will be able to implement RAID and storage networking technologies. CO4: Students will be able to apply backup, disaster recovery, and network security techniques. CO5: Students will be able to implement storage replication and remote data protection strategies.
SLM Units (Block Pattern)	Block 1: Introduction to Information storage and Management (11 Hrs) Information Storage: Data - Types of Data-Information -Storage, Evolution of Storage Technology and Architecture, Data Center Infrastructure - Core elements- Key Requirements for Data Center Elements -Managing Storage Infrastructure, Key Challenges in Managing Information, Information Lifecycle Information Lifecycle Management - ILM Implementation -ILM Benefits. Introduction to Network Security Perimeter Security - Overview of Network Security, Access Control, Device Security, Security features on Switches, Firewall, Types of firewalls, Access Management, Multifactor Authentication, Wireless LAN (WLAN) Security and Network Admission Control (NAC) Block 2: Storage System Environment (11 Hrs) Components of a Storage System Environment - Host-Connectivity - Storage, Disk Drive Components -Platter - Spindle - Read/Write Head - Actuator Arm Assembly Controller - Physical Disk Structure - Zoned Bit Recording - Logical Block Addressing, Disk Drive Performance -1 Disk Service Time, Fundamental Laws Governing Disk Performance, Logical Components of the Host - Operating System - Device Driver -Volume Manager - File System - Application, Application Requirements and Disk Performance. Block 3: RAID and Storage Networking Technologies (11 Hrs) Implementation of RAID - Software RAID - Hardware RAID -RAID Array Component - RAID Levels Striping -Mirroring -Parity RAID 0 RAID 1 -Nested RAID -RAID 3 -RAID 4- RAID 5 --RAID 6 - RAID Comparison -RAID Impact on Disk-Performance - Application IOPS and RAID Configurations Introduction to Direct Attached Storage - Types of DAS - Introduction to SAN - Components of SAN FC connectivity - FC topologies - Introduction to NAS - NAS components - NAS Implementation - NAS File sharing. Block 4: Network Security Management (12 Hrs) Backup and Recovery Introduction to Business Continuity Backup Purpose -Disaster Recovery Operational Backup Archival, Backup Considerations, Backup Granularity, Recovery Considerations, Backup Methods, Backup Process, Backup and Restore Operations, Backup Topologies Server less Backup, Backup Technologies -Backup to Tape - Physical Tape Library - Backup to Disk - Virtual Tape Library. Network Security Management Secure Socket Layer (SSL) - Introduction to SSL, Open SSL basics, Problems with SSL, Cryptography, Message Digests Algorithms, Digital Signature and Public Key Infrastructure (PKI); Data Privacy - IPsec VPN, Dynamic Multipoint VPN (DMVPN), Group Encrypted Transport VPN (GET VPN), Secure Sockets Layer VPN (SSL VPN) and Multiprotocol Label Switching VPN (MPLS VPN)
Reference Books	- EMC Education Services, "Information Storage and Management: Storing, Managing, and Protecting Digital Information", Wiley Publishing Inc., 1st edition, 2009. - Robert Spalding, "The Complete Reference Storage Networks", TATA MCGRAW-HILL EDITION - Nigel Poulton, "Data Storage Networking", SYBEX. - Thomas C Joseph, "Distributed Storage Networks Architecture, Protocol and Management", WILEY - Robert Spalding, "Storage Networks: The Complete Reference ", Tata McGraw Hill Publication, 2003 - Network Security Bible by Eric Cole, Wiley; Second edition (2009)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	2	-	1	2	2	1	-	-	2	2
CO2	2	3	2	-	2	2	2	-	-	-	2	2
CO3	2	3	3	1	3	3	3	-	-	1	3	2
CO4	2	3	3	2	3	3	3	2	-	1	3	3
CO5	2	3	3	1	3	3	3	1	-	1	3	3

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	2	2	1	2
CO2	1	2	2	1	2
CO3	2	3	2	2	3
CO4	2	3	3	2	3
CO5	2	3	3	2	3

41. OLBCA53,54,44,60 - Metaverse Technologies and Applications

Attribute	Details
Course Code & Name	OLBCA55 - Metaverse Technologies and Applications (Elective)
Credits	3 Credits
L-T-P-C	3-0-0-3
Course Objectives	• To understand the fundamentals, history, and key components of the Metaverse including VR, AR, and MR. • To gain technical knowledge of VR, AR, and MR technologies, devices, and content creation tools. • To develop practical skills in creating simple virtual environments using development tools like Unity and Unreal Engine. • To analyze real-world applications and case studies of the Metaverse in gaming, education, business, and other fields.



Attribute	Details
	To evaluate the ethical, legal, societal implications, and future trends of Metaverse technologies.
Course Outcomes	CO1: Students will be able to understand Metaverse concepts, platforms, and implications. CO2: Students will be able to analyze VR, AR, and MR technologies and applications. CO3: Students will be able to develop basic metaverse environments using game engines. CO4: Students will be able to evaluate Metaverse applications across industries. CO5: Students will be able to analyze ethical, legal, and societal issues in the Metaverse.
SLM Units (Block Pattern)	Block 1: Introduction to Metaverse (11 Hrs) Definition and key components (VR, AR, MR), History and evolution of the Metaverse, Major players and platforms in the Metaverse Overview of hardware and software technologies, Key stakeholders (developers, users, businesses), Economic and social implications. Block 2: Technical Foundations (11 Hrs) Virtual Reality (VR) Fundamentals Basics of VR technology and devices, VR content creation and development tools, Applications of VR in various industries. Augmented Reality (AR) and Mixed Reality (MR) Basics of AR and MR technology and devices, AR/MR content creation and development tools, Applications of AR and MR in various industries. Block 3: Creating Metaverse Experiences (11 Hrs) Metaverse Development Tools Introduction to Unity and Unreal Engine, Basics of 3D modelling and animation, Creating simple virtual environments User Experience Design in the Metaverse Principles of user experience (UX) design, Designing intuitive interfaces and interactions, Testing and evaluating user experiences. Block 4: Applications and Case Studies (12 Hrs) Gaming and Social Interactions Role of the Metaverse in gaming, Social platforms and virtual communities, Case studies of popular metaverse games and platforms. Education, Business, and Beyond Educational applications and virtual classrooms, Business applications, virtual offices, and e-commerce, Innovative uses in healthcare, real estate, and other fields.
Reference Books	“The Metaverse: And How It Will Revolutionize Everything” (2022) by Matthew Ball, Liveright. Publication “Metaverse For Beginners and Advanced” (2022) by Darell Freeman, Draft2Digital Publications. “The Metaverse Handbook-Innovating for the Internet’s Next Tectonic Shift”, by Terry QuHarrison Wiley Publishers.

CO-PO Mapping Matrix

C O	P O 1	P O 2	P O 3	P O 4	P O 5	P O 6	P O 7	P O 8	P O 9	P O 10	P O 11	P O 12
CO1	2	1	1	-	1	-	1	-	-	-	3	2
CO2	2	2	2	1	2	-	2	-	-	-	3	2

C O	P O 1	P O 2	P O 3	P O 4	P O 5	P O 6	P O 7	P O 8	P O 9	P O 10	P O 11	P O 12
C O 3	2	3	3	3	3	1	3	-	-	2	3	3
C O 4	2	3	2	-	2	-	2	1	2	1	3	3
C O 5	1	2	2	-	1	-	2	3	2	1	3	2

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	-	1	2	2
CO2	1	-	2	3	2
CO3	3	1	3	3	3
CO4	2	-	2	3	3
CO5	1	1	2	2	3

42. OLBCA53,54,44,61 - Augmented Reality Systems and Technologies

Attribute	Details
Course Code & Name	OLBCA56 - Augmented Reality Systems and Technologies (Elective)
Credits	3 Credits
L-T-P-C	3-0-0-3
Course Objectives	- To understand the fundamentals of Augmented Reality and its core technologies. - To develop basic AR projects using tools, 3D models, tracking, and user interactions. - To design intuitive and interactive AR user experiences. - To explore AR use in education, healthcare, and industry. - To understand future AR trends and related ethical and legal issues.
Course Outcomes	CO1: Students will be able to differentiate AR, VR, and MR and develop basic AR applications. CO2: Students will be able to create AR projects using Unity and Unreal Engine. CO3: Students will be able to design intuitive AR user interfaces. CO4: Students will be able to evaluate AR applications in education, healthcare, and industry. CO5: Students will be able to analyze emerging AR trends and ethical concerns.
SLM Units (Block)	

Attribute	Details
Pattern)	Block 1: Foundations of Augmented Reality (11 Hrs) Definition and differentiation from Virtual Reality (VR) and Mixed Reality (MR), History and evolution of AR technology, Overview of current AR applications and platforms. Types of AR devices (e.g., smartphones, tablets, AR glasses), Overview of AR software development kits (SDKs) such as ARKit, AR Core, and Vuforia, Basic concepts of AR rendering and tracking. Block 2: AR Development Tools and Techniques (11 Hrs) Introduction to AR development environments (Unity, Unreal Engine), Setting up a basic AR project, Understanding key components and workflow in AR development. Working with markers and marker less AR, integrating 3D models and animations into AR scenes, Implementing simple interactions and user interfaces in AR. Block 3: Design Principles and User Experience in AR (11 Hrs) Principles of user experience (UX) design specific to AR, Best practices for designing intuitive AR interfaces, Case studies of successful AR UX designs. Techniques for user interaction in AR environments, Gesture recognition and control, Designing for natural user interactions. Block 4: Applications and Case Studies (12 Hrs) Educational applications of AR, Case studies on AR-based training programs, Benefits and challenges of using AR in education. AR applications in healthcare for diagnostics, surgery, and therapy, Industrial applications of AR in manufacturing, maintenance, and logistics, Case studies highlighting successful AR implementations in healthcare and industry.
Reference Books	• “Augmented Reality: Principles and Practice” by Dieter Schmalstieg and Tobias Hollerer • “Learning Augmented Reality: Developing Augmented Reality Apps for iOS and Android” by Jonathan Linowes • “Pro Augmented Reality: Developing Augmented Reality Applications with Unity and Vuforia” by Jesse Glover and Jonathan Linowes

CO-PO Mapping Matrix

C O	P O 1	P O 2	P O 3	P O 4	P O 5	P O 6	P O 7	P O 8	P O 9	P O 10	P O 11	P O 12
C O 1	2	2	2	1	2	-	2	-	-	-	2	2
C O 2	2	3	3	3	3	1	3	-	-	1	3	3
C O 3	2	3	3	2	3	1	3	-	1	1	3	2
C O 4	2	3	2	-	2	1	2	1	2	1	3	3
C O 5	1	2	2	-	1	-	2	3	2	1	3	2

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	-	2	3	2
CO2	3	1	3	3	3
CO3	3	1	2	3	3
CO4	2	-	2	3	3
CO5	1	1	2	3	3

43. OLBCA53,54,44,62 - Digital Forensic principles and applications

Attribute	Details
Course Code & Name	OLBCA53,54,44,62 - Digital Forensic principles and applications (Elective)
Credits	3 Credits
L-T-P-C	3-0-0-3
Course Objectives	• To understand the principles and processes of digital forensics. • To learn techniques for data acquisition and evidence preservation. • To explore forensic analysis of operating systems and networks. • To use digital forensic tools for investigating cybercrimes. • To understand legal and ethical requirements in forensic investigations.
Course Outcomes	CO1: Explain the methodology and principles of digital forensics. CO2: Perform secure data acquisition and imaging. CO3: Analyze file systems and extract digital evidence. CO4: Conduct network and mobile forensics investigations. CO5: Prepare forensic reports and understand legal compliance.
SLM Units (Block Pattern)	Block 1: Introduction to Digital Forensics (11 Hrs) Cybercrime overview, role of digital forensics, forensic principles, rules of evidence, chain of custody, incident response. Block 2: Data Acquisition & Preservation (11 Hrs) Volatile vs. non-volatile memory, live and dead forensics, disk imaging, write blockers, hashing (MD5, SHA). Block 3: File System Analysis (11 Hrs) Windows and Linux file systems (NTFS, FAT, ext), recovering deleted files, registry analysis, memory analysis. Block 4: Network & Mobile Forensics (12 Hrs) Packet capturing and analysis, log analysis, tracking emails, mobile device forensics, extracting data from smartphones.
Reference Books	• “Digital Forensics and Incident Response” by Gerard Johansen • “Computer Forensics and Cyber Crime” by Marjie T. Britz



CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	1	-	1	1	2	3	1	-	2	2
CO2	2	3	2	1	3	2	2	3	-	1	3	2
CO3	3	3	2	1	3	3	2	2	-	1	3	2
CO4	2	3	2	1	3	3	2	2	-	1	3	2
CO5	1	2	1	-	2	2	1	3	3	2	3	3

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	2	1	2
CO2	2	2	2	2	3
CO3	2	3	2	2	3
CO4	2	3	2	3	3
CO5	1	2	3	1	3

44. OLBCA53,54,44,63 - Applications of IoT and Autonomous

Attribute	Details
Course Code & Name	OLBCA53,54,44,56 - Applications of IoT and Autonomous Systems (Elective)
Credits	3 Credits
L-T-P-C	3-0-0-3
Course Objectives	• Understand the fundamental architecture, protocols, and components of IoT systems. • Work with IoT hardware and software platforms for building IoT prototypes. • Perform data acquisition, processing, visualization, and analytics in IoT. • Analyse security challenges and apply suitable techniques to protect IoT systems. • Explore the integration of autonomous systems with IoT and assess real-world applications.



Attribute	Details
Course Outcomes	CO1: Students will be able to understand IoT architecture, protocols, and applications. CO2: Students will be able to work with IoT hardware platforms and cloud services. CO3: Students will be able to analyze IoT CO4: Students will be able to implement CO5: Students will be able to to to applications.
SLM Units (Block Pattern)	Block 1: IoT Fundamentals (11 Hrs) Overview of IoT: Definition, history, and evolution, IoT architecture: Layers and components, Key IoT technologies: Sensors, actuators, and connectivity protocols. IoT Communication Protocols Overview of communication models: Device-to-Device, Device-to-Cloud, Device-to-Gateway, Back-End Data-Sharing, Common IoT protocols: MQTT, COAP, HTTP, LoRaWAN, Zigbee, Bluetooth, Comparison of communication protocols and their use cases. Block 2: IoT System Design and Development (11 Hrs) IoT Hardware Platforms Introduction to IoT development boards: Arduino, Raspberry Pi, ESP8266, ESP32, Sensor integration: Types of sensors and their applications, Actuator integration: Types of actuators and their applications. IoT Software Platforms and Tools Overview of IoT software platforms: Node-RED, ThingsBoard, Blynk, IoT development environments and tools: Arduino IDE, PlatformIO, Thonny, Introduction to IoT cloud platforms: AWS IoT, Google Cloud IoT, Azure IoT Hub. Block 3: Data Management and Analytics in IoT (11 Hrs) IoT Data Collection and Storage Data acquisition: Techniques and challenges, Data storage solutions: Edge computing, cloud storage, databases, Introduction to IoT data management tools IoT Data Analytics and Visualization Data processing and analytics: Techniques and tools, Machine learning for IoT: Basic, concepts and applications, Data visualization tools and techniques: Dashboards, real-time monitoring. Block 4: Security and Privacy in IoT (12 Hrs) IoT Security Challenges and Solutions Security threats in IoT: Device, network, and data level threats, IoT security best practices: Encryption, authentication, access control, Introduction to IoT security frameworks and protocols. Privacy Considerations in IoT Privacy concerns in IoT: Data collection, storage, and sharing, Legal and regulatory frameworks: GDPR, HIPAA, CCPA, Strategies for ensuring privacy in IoT applications.
Reference Books	• “Internet of Things: A Hands-On Approach” by Arshdeep Bahga and Vijay Madisetti • “Building the Internet of Things: Implement New Business Models, Disrupt Competitors, Transform Your Industry” by Maciej Kranz • “Internet of Things for Architects” by Perry Lea

CO-PO Mapping Matrix

C O	P O 1	P O 2	P O 3	P O 4	P O 5	P O 6	P O 7	P O 8	P O 9	P O 10	P O 11	P O 12
CO1	2	2	2	1	2	1	2	-	-	-	2	2
CO2	2	3	3	3	3	2	3	-	-	1	3	3
C	3	3	3	2	3	3	2	-	-	1	3	3

C O	P O 1	P O 2	P O 3	P O 4	P O 5	P O 6	P O 7	P O 8	P O 9	P O 10	P O 11	P O 12
O 3												
C O 4	2	3	3	2	3	2	2	2	-	-	3	3
C O 5	2	2	3	1	2	2	2	1	1	1	3	3

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	2	2	2
CO2	3	2	2	3	3
CO3	2	3	2	3	3
CO4	2	2	2	3	3
CO5	1	2	2	3	3

45. OLBCA53,54,44,56 - TCP/IP Architecture and Protocols

Attribute	Details
Course Code & Name	OLBCA53 - TCP/IP Architecture and Protocols (Elective)
Credits	3 Credits
L-T-P-C	3-0-0-3
Course Objectives	• To understand the basics of computer networks, communication layers, and addressing schemes. • To learn IP routing protocols and subnetting methods like CIDR and VLSM. • To study UDP and TCP protocols with a focus on connection management and reliability. • To explore DNS, multicasting, TCP performance, and remote login protocols. • To examine application layer protocols and IPv6 features with practical use cases.
Course Outcomes	CO1: Students will be able to understand TCP/IP architecture and internetworking concepts. CO2: Students will be able to analyze IP routing and CO3: Students will be able to understand CO4: Students will be able to analyze DNS, CO5: Students will be able to evaluate
SLM Units (Block Pattern)	Block 1: Introduction to Networking (11 Hrs) Evolution of open Networks, Layering of communication process, TCP/IP Layering, standardization, Internetworking Concept and Architectural Model, Internet Addresses. Link Layer Encapsulation, Physical addresses, IEEE&MACS. ARP-Operations, Cache &

Attribute	Details
	timeouts. RARP-Overview, Operations, Primary and Backup RARP Servers. Loopback Interface. Block 2: IP Routing (11 Hrs) IP Routing Principles, Routing IP Datagrams, RIP, OSPF, HELLO, BGP, Trace routeprogram, CIDR- Subnetting, VLSM, Supernetting. Block 3: User Datagram Protocol (11 Hrs) UDP Header, UDP Checksum, Multiplexing, Demultiplexing & Ports, Maximum Datagram Size. Sliding Windows, TCP-Passive and Active Opens, RTT Estimation, TCP Connection Establishment and Termination. Block 4: Domain Name System (12 Hrs) DNS-Basics, Resolution, Caching, DNS Message Format, TELNET Protocol, Rlogin-protocol. FTP-Protocol, Process Model. TFTP, NFS, SMTP-Protocol. POP, IMAP, MIME. IPV6-Features, Datagram format, Use of Multiple Headers, IPV4 Vs IPV6. Applications of IPV6.
Reference Books	• Comer Douglas E, (2010) Internetworking with TCP/IP: Principles, Protocols, and Architecture, Vol 1, 5th Edition, PhiLearning • Peter Loshin, (1999) TCP/IP Clearly Explained, Elsevier India • Behrouz A. Forouzan, (2003) TCP/IP Protocol Suite, 2nd Edition, Tata Mc-Grow-Hill publications. • Charles M. Kozierok (2005) TCP/IP Guide A Comprehensive, Illustrated Internet Protocols Reference, William Pollock • Pete Loshin (2003) TCP/IP Clearly explained, 4th edition, Morgan Kaufmann Publication

CO-PO Mapping Matrix

C O	P O 1	P O 2	P O 3	P O 4	P O 5	P O 6	P O 7	P O 8	P O 9	P O 10	P O 11	P O 12
C O 1	2	2	2	-	-	-	2	-	-	-	2	1
C O 2	2	3	2	-	-	-	2	-	-	-	2	1
C O 3	2	2	2	-	-	-	2	-	-	-	2	1
C O 4	2	3	2	-	-	-	2	-	-	-	2	1
C O 5	2	2	2	-	-	-	2	-	-	-	2	1

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	2	2	1
CO2	1	1	2	2	2
CO3	1	1	2	2	1
CO4	1	1	2	2	2
CO5	1	1	2	2	1

46. OLBCA53,54,44,57 - Digital Image Processing

Attribute	Details
Course Code & Name	OLBCA54 - Digital Image Processing (Elective)
Credits	3 Credits
L-T-P-C	3-0-0-3
Course Objectives	• To learn digital image fundamentals. • To be exposed to simple image processing techniques. • To create image compression and segmentation techniques. • To represent image in form of features.
Course Outcomes	CO1: Students will be able to understand digital image fundamentals and file formats. CO2: Students will be able to apply image enhancement and restoration techniques. CO3: Students will be able to perform multi-image manipulation and color space transformations. CO4: Students will be able to apply supervised image classification techniques. CO5: Students will be able to apply unsupervised classification and change detection techniques.
SLM Units (Block Pattern)	Block 1: Fundamentals of Image Processing (11 Hrs) Image representation and fundamentals - Image and Digital images: Different types of images and acquisition (like real images, aerial images, etc.), simple image model, sampling and reconstruction uniform sampling and quantization. Various image formats BIVIP, TIFF, GIF, PIX, JPEG etc. Block 2: Digital Analysis (11 Hrs) Digital Analysis - image rectification and restoration: Radiometric, atmospheric and geometric corrections, correction in the spatial spectrum of the images. image enhancement - Contrast manipulation, Gray-level thresholding, level slicing, and contrast stretching. Block 3: Multi Image Manipulation (11 Hrs) Multi-image manipulation - Multispectral band ratio and differencing, principal components, canonical components, vegetation components, and intensity-hue-saturation (HIS) colour space transformation. Block 4: Image Classification-Supervised (12 Hrs) Image classification, Supervised classification - the classification stage, minimum distance to mean classifier, parallelepiped classifier, Gaussian maximum likelihood classifier and the training stage.

Attribute	Details
Reference Books	• Digital Image Processing, Prentice Hall, Kenneth, R. Castleman, Prentice - Hall, Reprint 2010. • Remote Sensing - Quantitative Approach, Phillip, Swain & Shirley Davis, McGraw Hill, USA • Modern Image Processing, Wrapping and Classification Techniques by Watking, Sadun, Marenka.

CO-PO Mapping Matrix

C O	P O 1	P O 2	P O 3	P O 4	P O 5	P O 6	P O 7	P O 8	P O 9	P O 10	P O 11	P O 12
C O 1	2	2	1	1	2	1	1	-	-	-	2	1
C O 2	2	3	2	2	3	2	1	-	-	-	2	2
C O 3	2	3	2	2	3	2	1	-	-	-	2	2
C O 4	2	3	2	2	3	2	1	-	-	-	2	2
C O 5	2	3	2	2	3	2	1	-	-	-	2	2

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	1	1	1
CO2	2	1	1	1	2
CO3	2	1	1	1	2
CO4	2	1	1	1	2
CO5	2	1	1	1	2



SEMESTER VI

38. OLBCA61 - Internship Embedded Project Work & Viva voce (or) Research & Dissertation

Attribute	Details
Course Code & Name	OLBCA61 - Internship Embedded Project Work & Viva voce (or) Research & Dissertation (Core- Major)
Credits	18 Credits
L-T-P-C	0-0-54-18

SEMESTER VII

47. OLBCA71 - Linux System Administration

Attribute	Details
Course Code & Name	OLBCA71 - Linux System Administration (Core- Major)
Credits	4 Credits
L-T-P-C	3-0-2-4
Course Objectives	• To provide a foundational understanding of the Linux operating system, its architecture, and command-line interface for effective system usage and management. • To equip students with the skills to install, configure, and maintain Linux systems, including disk management, boot process, and package management. • To introduce user and group management techniques, including setting permissions, ownership, and access control to ensure system security and organization. • To develop the ability to manage Linux services and processes, such as job scheduling, daemon control, and system monitoring. • To enable students to configure networking in Linux.
Course Outcomes	CO1: To describe Linux file management and permission mechanisms. CO2: To perform Linux installation and system configuration. CO3: To manage users, groups, privileges, and software subscriptions in a Red Hat Linux environment. CO4: To install, update, and manage software packages and system services using YUM and systemd. CO5: To configure and manage secure remote access and web server services in Linux.
SLM Units (Block Pattern)	Block 1: Introduction to Linux (12 Hrs) Introduction to Linux Distributions: Operating Systems and Linux, Open Source Software, File Systems, System Directories, Listing File Attributes, Listing Directory Attributes, File Management, File Permissions, Absolute Paths, Relative Paths, The Security Implications, Changing File Permissions, Directory Permissions, Changing File Ownership. Block 2: Installation of Linux (12 Hrs) Installation of Linux-Installing Red Hat Linux, Basic Disk Structure, Partitioning Tool, Device name allocation, Unix file system and Mount points, Partitions and Mount points, partitioning issues, Installing GRUB/LILO, Booting the Installation Program, Selecting an installation method, The graphical interface, Installation types, Disk Partitioning, Disk Druid Window, Controlling Disk Druid, Firewall Configuration, Setting the root password, Authentication, Package group selection. Block 3: User Management (12 Hrs) Management of users and groups: Managing Users and Groups, User Private Group, Shadow passwords, Managing Users in a Graphical Environment, Command Line Tools for Managing Users and Groups, The Process on command useradd, Creating Group Directories, Gaining Privileges, The su Command, The sudo Command. Registering the System and Attaching Subscriptions, subscription-manager commands, Managing Software Repositories, Removing Subscriptions, Accessing Support Using the Red Hat Support Tool, Installing the Red Hat Support Tool, Registering the Red Hat Support Tool Using the Command Line. Block 4: Installation and Management of software (12 Hrs) Installing and Managing Software, Yum the Red Hat package manager, Checking For and Updating Packages, Checking For Updates, Updating Packages, Updating a Single Package, Updating the rpm package, Updating All Packages and Dependencies, Updating Security-Related Packages, Preserving Configuration File Changes, Upgrading the System Off-line with ISO and Yum, Working with Packages, Installing Packages, Removing Packages.

Attribute	Details
	Managing Services with systemd, Features of Systemd, Managing System Services, Working with systemd Targets, Changing to Rescue Mode, Emergency Mode, Shutting Down, Suspending, and Hibernating the System. Block 5: OpenSSH Protocol (12 Hrs) OpenSSH, SSH Protocol, SSH Features, Event Sequence of an SSH Connection, Authentication, Channels, Configuring OpenSSH Configuration Files, Starting an OpenSSH Server, SSH for Remote Connections, OpenSSH Clients, Using ssh Utility, Using scp Utility, Using the sftp Utility, X11 Forwarding, Port Forwarding. Web Servers, Apache HTTP Server, Updating the Configuration, Running httpd Service, Verifying Service Status, Setting Up Virtual Hosts.
Reference Books	• Linx System Administration Compiled Study Material from Subrahmanya Bhat, SIMS • Red Hat Enterprise Linux 7 System Administrator's Guide - Maxim Svistunov, Stephen Wadeley. • The Definitive Guide to CentOS - Peter Membrey, Tim Verhoeven, and Ralph Angenendt. • NPTL material from www.nptl.ac.in. • Mourani, G. (2000). Securing and Optimizing Linux: RedHat Edition. Open Network Architecture® and OpenDocs Publishing.

CO-PO Mapping Matrix

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	2	1	3	-	2	1	-	-	2	1
CO2	2	2	2	1	3	-	2	1	-	-	2	2
CO3	2	2	2	1	3	-	2	1	-	-	2	2
CO4	2	2	2	1	3	-	2	1	-	-	2	2
CO5	2	3	3	2	3	1	3	2	-	-	3	2

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	2	1	2
CO2	1	1	2	1	2
CO3	1	1	2	1	2



CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO4	1	1	2	1	2
CO5	2	1	2	2	3

48. OLBCA72 - Advanced Java

Attribute	Details
Course Code & Name	OLBCA72 - Advanced Java (Core-Major)
Credits	4 Credits
L-T-P-C	3-0-2-4
Course Objectives	• To understand how to connect and interact with databases using JDBC API. • To learn to build dynamic web applications using Servlets and handle HTTP requests and responses. • To develop server-side web pages using JSP with session handling and database connectivity. • To implement object-relational mapping and data persistence using Hibernate. • To build modular and secure enterprise applications using the Spring Framework.
Course Outcomes	CO1: To connect Java applications to databases and perform queries, transactions, and batch processing using JDBC. CO2: To create web applications using servlets by handling client requests, sessions, cookies, and database access. CO3: To understand and develop dynamic web applications using JSP features such as forms, sessions, database access, and tag libraries. CO4: To configure Hibernate and perform ORM-based data operations with transaction management. CO5: To understand and develop secure web applications using the Spring Framework.
SLM Units (Block Pattern)	Block 1: Java JDBC Concepts (12 Hrs) JDBC: Introduction to JDBC, JDBC Driver types, JDBC database connections, JDBC Statements, Prepared Statement, Callable Statement, ResultSet, JDBC data types, transactions, Batch Processing, Stored Procedure. Block 2: Servlet Aspects (12 Hrs) Servlet: Servlet structure, Life Cycle of a Servlet, Using Tomcat for Servlet Development, The Servlet API Handling Client Request: Form data, Handling client HTTP request and server HTTP Response, HTTP status codes, Handling Cookies, Session tracking, Database Access. Block 3: Overview of JSP (12 Hrs) JSP: Overview of JSP Technology, Need of JSP, Advantages of JSP, Life Cycle of JSP Page, JSP Processing, JSP Application Design with MVC, Setting Up the JSP Environment, JSP Directives, JSP Action, JSP Implicit Objects, JSP Form Processing, JSP Session and Cookies Handling, JSP Session Tracking JSP Database Access, JSP Standard Tag Libraries, JSP Custom Tag, JSP Expression Language, JSP Exception Handling. Block 4: Hibernate (12 Hrs) Hibernate: Introduction, Hibernate Configuration, Hibernate Concepts, Hibernate O-R Mapping, Manipulating and Querying, Hibernate Query Language, Criteria Queries, Native SQL, Transaction and Concurrency.

Attribute	Details
	Block 5: Spring Framework (12 Hrs) Spring Framework: Spring Basics, Spring Container, Spring AOP, Spring Data Access, Spring O-R/mapping, Spring Transaction Management, Spring Remoting and Enterprise Services, Spring Web MVC Framework, Securing Spring Application.
Reference Books	• Keogh, J. (2002). J2EE: The Complete Reference. Tata McGraw-Hill. • Lindfors, J., & Fleury, M. (2002). JMX: Managing J2EE with Java Management Extensions. Sams Publishing. • Broemmer, D. (2003). J2EE Best Practices: Java Design Patterns, Automation, and Performance (Vol. 8). John Wiley & Sons.

CO-PO Mapping Matrix

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	2	3	3	2	2	-	-	-	2	2
CO2	2	3	3	3	3	2	2	-	-	-	2	2
CO3	2	3	3	3	3	2	2	-	-	-	2	2
CO4	2	3	3	3	3	3	2	-	-	-	2	2
CO5	2	3	3	3	3	2	3	1	-	1	3	3

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	2	2	2
CO2	3	2	2	3	2
CO3	3	2	2	3	2
CO4	3	3	2	2	2
CO5	3	2	3	3	3

49. OLBCA73 - Research Methodology

Attribute	Details
Course Code & Name	OLBCA73 - Research Methodology (Core-Major)
Credits	4 Credits
L-T-P-C	3-1-0-4
Course Objectives	1. To introduce the fundamentals of scientific research, research design, and problem formulation. 2. To provide knowledge of probability, statistical analysis, and stochastic processes for research applications. 3. To introduce scripting languages and their application in programming, web development, and networked systems. 4. To develop technical writing skills and an understanding of research methods in computer science. 5. To enhance knowledge of research methodology through online certification and practical learning.
Course Outcomes	CO1: To analyze research problems, apply appropriate research methodologies, and formulate a research proposal. CO2: To apply probability and statistical methods to analyze data and model uncertainty. CO3: To develop applications using Python for web, network, GUI, and database programming. CO4: To prepare research reports and presentations and understand research methods in computer science. CO5: To apply online certification concepts to enhance research skills.
SLM Units (Block Pattern)	Block 1: Research Methodology (12 Hrs) Introduction to Scientific Research, Meaning, Objectives and Significance of Research Motivation in Research, Types of research approaches, Quantitative research methods, Research methods versus methodology, Research process, Criteria of good research, Research problems, Necessity of defining the problem, Technique involved in defining the problem, Design and Development Research Methods, Meaning of research design, Need for research design, Features of a good design, Different research designs, Basic principles of experimental designs, Ethics in research, Building expertise in the areas of interest, generating the base content in the selected area, literature survey for research work, arriving at directions of research, Formulation of research title, development of criteria based research proposal. Block 2: Probability and Statistics (12 Hrs) Probability as a measure of uncertainty, probabilities for events, axioms, probability rules, Fail time data analysis, Hazard models, conditional probability, Bayes' rule, random variables, probability distributions, discrete and continuous distributions, univariate and multivariate distributions, joint, marginal, conditional distributions, expected values (mean, variance, covariance), sampling/simulation, study of a population or distribution, System reliability, Stochastic process, Software tools for Mathematical and statistical analysis, Scilab/SPSS. Block 3: Scripting Languages (12 Hrs) Overview: The nature of scripting languages, scripting v/s programming, Python Programming. Regular expressions, Network programming, Internet client programming, Multithreaded programming, GUI programming, Database programming, Web clients and servers, Web programming: CGI and WSGI, Web frameworks: Django, web services. Block 4: Technical writing & CS Research Context (12 Hrs) Significance of report writing, Structure and Components of Research Report, Types of Report: research papers, thesis, Research Project Reports, Precautions for writing research reports, Pictures and Graphs, Citation Styles, Oral presentation, Nature of Computer Science, Scientific Methods in Computer science, Types of Research in CS, Research

Attribute	Details
	Methods in Computer Science, Research Paradigms in CS, Grand Challenges for CS Research. Block 5: Online Certification (12 Hrs) Online Certification Course based on Research Methodology from Swayam/Swayam ARPIT Refresher Programme.
Reference Books	• Research Methodology: Methods and Techniques by C. R. Kothari, New Age Publications, 2004 • RESEARCH METHODOLOGY By R. PANNEERSELVAM, PHI Publications 2014 • Research Methodology: A Step-by-Step Guide for Beginners by Ranjit Kumar, SAGE Publications 2010 • Research Methodology by D K Bhattacharyya, Excel Books 2009 • Fundamental of Research Methodology and Statistics by Yogesh Kumar Singh, New Age International § Ltd. 2006

CO-PO Mapping Matrix

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	2	-	-	1	1	2	2	1	3	2
CO2	3	3	2	1	2	3	1	-	-	-	2	1
CO3	2	2	3	3	3	2	2	-	-	-	2	2
CO4	1	2	1	-	1	-	1	2	3	2	2	2
CO5	1	1	1	-	2	-	-	-	1	1	3	2

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	-	-	2	-	3
CO2	-	2	1	-	2
CO3	3	2	2	2	2
CO4	-	-	3	-	3
CO5	-	-	1	-	3



50. OLBCA74 - Software Engineering

Attribute	Details
Course Code & Name	OLBCA74 - Software Engineering (Core- Major)
Credits	4 Credits
L-T-P-C	4-0-0-4
Course Objectives	• To understand the fundamentals of software engineering and various software development process models. • To analyze user requirements and prepare structured Software Requirement Specifications (SRS). • To apply design principles and modular approaches in software design using tools like DFDs and structure charts. • To develop detailed software designs and apply best programming practices for implementation and verification. • To perform software testing, understand maintenance strategies, and gain exposure to automated testing tools.
Course Outcomes	CO1: To identify the various phases and process models of software engineering. CO2: To develop an IEEE SRS using requirement analysis and specification techniques. CO3: To apply design principles and develop structured software design models. CO4: To apply detailed design and programming practices for software development and verification. CO5: To apply software testing techniques and perform software maintenance activities.
SLM Units (Block Pattern)	Block 1: Introduction (12 Hrs) The Software Problem, Software Engineering Problem, The Software Engineering Approach, Phased Development Process, Software Process, Characteristics of a Software Process, A Process Step Specification, Waterfall Model, Prototype Model, Iterative Enhancement Model, Spiral Model. Project Management Process, Software Configuration Management Process [SCM], Process Management Process. Block 2: Software Requirement Analysis and Specification (12 Hrs) Software Requirement, Need for SRS, Requirement Process, Problem Analysis, Analysis Issues, Informal Approach, Structured Analysis, Prototyping, Requirement Specification, Characteristics of an SRS, Components of SRS, Specification Languages, Structure of a requirements document, Requirement Validation, Requirement Reviews. Block 3: Project Design Management (12 Hrs) Design Principles, Problem Partitioning and Hierarchy, Abstraction, Block-Level Concepts, Coupling, Cohesion, Design Notation and Specification, Structure Charts, Specifications, Structured Design Methodology, Restate the Problem as a Data Flow Diagram, Identify the Most Abstract Input and Output Data Elements, First- Level Factoring, Factoring the Input, Output and Transform Branches, Design Heuristics, Design Validation/Verification, Design Reviews, Automated Cross-Checking. Block 4: Detailed Design and Programming Management (12 Hrs) Specifying Functional Blocks, Detailed Design, PDL, Logic/Algorithm Design, Verification, Design Walkthroughs, Critical Design Review, Consistency Checkers. Programming Practice, Top-Down and Bottom-Up, Structured Programming, Information Hiding, Programming Style, Internal Documentation, Verification, Code Reading, Static Analysis, Symbolic Execution, Proving Correctness, Code Inspections or Reviews, Block Testing. Block 5: Testing and Project Maintenance (12 Hrs) Introduction, Testing Fundamentals, Test Oracles, Top-Down and Bottom-up Approaches, Test Cases and Test Criteria, Psychology of Testing, Type of Testing, Functional Testing, Structural Testing, Levels of Testing, Test Plan, Software Maintenance Activities, Definitions of Software Maintenance, Types of Software Maintenance, Corrective Maintenance, Preventive Maintenance, Adaptive Maintenance, Perfective

Attribute	Details
	Maintenance. Introduction to Testing Tools: Overview of WinRunner, SilkTest, SQA Robot, LoadRunner.
Reference Books	• Integrated Approach to Software Engineering by Jalote Pankaj. • Software Project Management, A Process Driven Approach by Ashfaq Ahmed • Effective Software Project Management by Robert K Wysocki • Sommerville Software Engineering Eighth edition by Lan Sommerville • Software Engineering by Barry M Boehm. • Software Engineering by Bharath Bhushan Agarwal and Sumit Prakash Tayal

CO-PO Mapping Matrix

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	2	-	-	-	3	1	-	-	2	2
CO2	2	3	3	-	1	-	3	1	2	2	2	2
CO3	2	3	3	2	2	1	3	1	2	2	2	2
CO4	2	3	3	3	3	-	3	1	1	2	2	2
CO5	2	3	2	2	3	-	3	1	2	2	3	3

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	-	3	-	2
CO2	2	1	3	1	2
CO3	2	1	3	1	2
CO4	3	1	3	1	2
CO5	2	-	3	1	3



51. OLBCA75 - Big Data Analytics

Attribute	Details
Course Code & Name	OLBCA75 - Big Data Analytics (Core-Major)
Credits	3 Credits
L-T-P-C	3-0-0-3
Course Objectives	- To introduce the fundamental concepts of big data. - To familiarize students with big data technologies and ecosystems. - To enable students to understand the architecture and functioning of distributed computing frameworks. - To cultivate problem-solving skills through practical case studies - To prepare students for careers in data science and big data analytics
Course Outcomes	CO1: To understand data types, Big Data characteristics, and analytics flow. CO2: To differentiate SQL and NoSQL databases and explain Hadoop ecosystem components and applications CO3: To perform CRUD operations and manage data using keyspaces and collections in Apache Cassandra. CO4: To work with MongoDB, utilizing its features for dynamic queries, data storage, and replication, and perform operations using MongoDB Query Language. CO5: To use HIVE for data warehousing, employing its architecture, data types, file formats, and query language for managing large datasets.
SLM Units (Block Pattern)	Block 1: Introduction to Big Data and Analytics (11 Hrs) Classification of Data (Structured, Semi-structured and Unstructured), Characteristics of Data, What is Analytics?, Types of analytics, Evolution of Big Data, What is Big Data?, Definition of Big Data, Challenges of Big Data, Characteristics of Big Data, Domain Specific Examples of Big Data - Web, Financial, Healthcare, Internet of Things, Environment, Logistics & Transportation, Industry, Retail, Analytics Flow for Big Data, Big Data Stack, Mapping Analytics Flow to Big Data Stack, Case Study: Genome Data Analysis, Weather Data Analysis, Analytics Patterns. Block 2: Introduction to NoSQL, Hadoop, and Distributed Data Systems (11 Hrs) NoSQL: Introduction: Where is it used? What is it? Types of NoSQL databases, Why NoSQL? Advantages of NoSQL, Use of NoSQL in Industry, SQL vs NoSQL, NewSQL. Hadoop: Introduction, Distributed Computing Challenges, History of Hadoop, Overview of Hadoop and Hadoop Ecosystems, Features and key advantages of Hadoop, Versions of Hadoop, Hadoop distributions, RDBMS versus Hadoop, Hadoop vs SQL, Integrated Hadoop Systems offered by leading market vendors, Cloud based Hadoop solutions, HDFS, Processing data with Hadoop, Managing Resources and applications with Hadoop YARN, Interacting with Hadoop Ecosystem. Block 3: Data Modeling and Management with Apache Cassandra (11 Hrs) Apache Cassandra-Introduction, Features-p top, Gossip and failure detection, Partitioner, Replication Factor, writes in Cassandra, CQL Data types, CQLSH, Key spaces, CRUD Operations, Collections-Set, List, Map, collections, Using Map: key, Value pair, Using Counter, Time to Live, Alter command- Alter table, Delete table, drop a table, Drop a database, Import and Export-export to CSV, import fromCSV, import from STDIN, Export to STDOUT, Querying System tables. Block 4: Data Management with MongoDB and MapReduce Framework (12 Hrs) MongoDB: Introduction: What is MongoDB? Why MongoDB? using JSON, creating or generating a unique key, Support for Dynamic Queries, Storing Binary Data, Replication, Sharding, updating information in-place, Terms used in RDBMS and MongoDB, Data types in MongoDB, MongoDB Query Language. MapReduce: Introduction, mapper, reducer, combiner, Partitioner, searching, sorting, compression.

Attribute	Details
Reference Books	• Big Data and Analytics by Seema Acharya, Subhashini Chellappan, Wiley India Pvt.Ltd.,2015 • Big Data Analytics - A Hands-On Approach by Arshdeep Bahga and Vijay Madisetti • Buhl, H. U., Röglinger, M., Moser, F., & Heidemann, J. (2013). Big data. Business & Information Systems Engineering, 5(2), 65-69.

CO-PO Mapping Matrix

C O	P O 1	P O 2	P O 3	P O 4	P O 5	P O 6	P O 7	P O 8	P O 9	P O 10	P O 11	P O 12
C O 1	2	2	1	-	1	3	1	-	-	-	2	2
C O 2	2	2	2	1	3	3	2	-	-	-	2	2
C O 3	2	2	3	2	3	3	2	-	-	-	2	2
C O 4	2	3	3	3	3	3	2	-	-	1	3	3
C O 5	2	3	3	3	3	3	2	-	-	1	3	3

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	3	1	1	2
CO2	1	3	1	1	2
CO3	2	3	2	2	2
CO4	3	3	2	2	3
CO5	3	3	2	2	3



52. OLBCA76 - Augmented Reality

Attribute	Details
Course Code & Name	OLBCA76 - Augmented Reality (Core-Major)
Credits	3 Credits
L-T-P-C	3-0-0-3
Course Objectives	• To understand the historical development, fundamental requirements and hardware technologies involved in creating virtual reality environments. • To analyse various input hardware devices and their characteristics used in designing effective 3D user interfaces. • To explore software technologies and database structures essential for building and managing virtual reality environments. • To learn and evaluate different 3D interaction and manipulation techniques for enhancing user experiences in virtual environments. • To examine the concepts, technologies, and applications of augmented reality and its distinction from virtual reality, including real-world case studies.
Course Outcomes	CO1: To understand the history, benefits, and hardware technologies of virtual reality systems. CO2: To analyze and compare 3D input devices and their characteristics for virtual reality interfaces. CO3: To understand VR database structures and environment components for virtual reality systems. CO4: To apply 3D interaction and wayfinding techniques in virtual reality environments. CO5: To analyze augmented and mixed reality technologies and applications.
SLM Units (Block Pattern)	Block 1: Introduction to Virtual Reality (11 Hrs) The historical development of VR: Real-time computer graphics, Flight simulation, Virtual environments, Requirements for VR, benefits of Virtual reality. HARDWARE TECHNOLOGIES FOR 3D USER INTERFACES: Visual Displays Auditory Displays, Haptic Displays, Choosing Output Devices for 3D User Interfaces. Block 2: 3D User Interface Input Hardware (11 Hrs) Input device characteristics, Desktop input devices, Tracking Devices, 3D Mice, Special Purpose Input Devices, Direct Human Input, Home - Brewed Input Devices, Choosing Input Devices for 3D Interfaces. Block 3: Software Technologies (11 Hrs) Database - World Space, World Coordinate, World Environment, Objects - Geometry, Position / Orientation, Hierarchy, Bounding Volume, Scripts and other attributes, VR Environment VR Database, Tessellated Data, LODs, Cullers and Occluders, Lights and Cameras, Scripts. Block 4: 3D interactive Techniques (12 Hrs) 3D Manipulation tasks, Manipulation Techniques and Input Devices, Interaction Techniques for 3D Manipulation, Theoretical Foundations of Wayfinding, User Centered Wayfinding Support, Environment Centered Wayfinding Support, Evaluating Wayfinding Aids, Design Guidelines System Control, Classification, Graphical Menus, Voice Commands, Gestural Commands.
Reference Books	• Alan B. Craig, Understanding Augmented Reality, Concepts and Applications, Morgan Kaufmann, 2013. • Doug A Bowman, Ernest Kuijff, Joseph J LaViola, Jr and Ivan Poupyrev, "3D User Interfaces, Theory and Practice" Addison Wesley, USA, 2005. • Oliver Bimber and Ramesh Raskar, "Spatial Augmented Reality: Merging Real and Virtual Worlds", 2005.

CO-PO Mapping Matrix

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	1	1	-	1	-	1	-	-	-	2	2
CO2	2	2	2	1	2	-	2	-	-	-	2	2
CO3	2	2	3	2	3	1	2	-	-	-	2	2
CO4	2	3	3	2	3	-	2	-	-	1	3	2
CO5	2	2	2	1	2	1	2	1	1	1	3	3

CO-PSO Mapping Matrix

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	-	1	2	2
CO2	1	-	1	2	2
CO3	2	1	2	3	2
CO4	2	1	2	3	3
CO5	1	-	1	3	3



SEMESTER VIII

53. OLBCA81 - Internship embedded Project work & Viva Voce (or) Research work & Dissertation

Attribute	Details
Course Code & Name	OLBCA81 - Internship embedded Project work & Viva Voce (or) Research work & Dissertation (Core-Major)
Credits	18 Credits
L-T-P-C	0-0-54-18


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MANGALORE



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BCA	OLBCA16	1	Communicative English I
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BCA	OLBCA16	1	Communicative English I
BCA	OLBCA16	1	Communicative English I
BCA	OLBCA22	2	Database Management and MYSQL
BCA	OLBCA22	2	Database Management and MYSQL
BCA	OLBCA22	2	Database Management and MYSQL
BCA	OLBCA22	2	Database Management and MYSQL

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BCA	OLBCA29	2	Digital Fluency
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BCA	OLBCA29	2	Digital Fluency
BCA	OLBCA29	2	Digital Fluency
BCA	OLBCA29	2	Digital Fluency
BCA	OLBCA24	2	AI in Business Administration

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BCA	OLBCA28	2	Health & Wellness
BCA	OLBCA28	2	Health & Wellness
BCA	OLBCA28	2	Health & Wellness
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BCA	OLBCA28	2	Health & Wellness
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BCA	OLBCA28	2	Health & Wellness
BCA	OLBCA28	2	Health & Wellness
BCA	OLBCA32	3	HTML, VB Script and Java Script
BCA	OLBCA32	3	HTML, VB Script and Java Script
BCA	OLBCA32	3	HTML, VB Script and Java Script
BCA	OLBCA32	3	HTML, VB Script and Java Script
BCA	OLBCA32	3	HTML, VB Script and Java Script

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BCA	OLBCA39	3	Constitution of India
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BCA	OLBCA39	3	Constitution of India
BCA	OLBCA41	4	Programming in Core Java

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Topic Name
The Genesis of Computing
The Evolution of Computing Machinery
Categorization of Modern Computers
The Role of Computers in Modern Society
Foundations of Computer Organization
The Central Processing Unit (CPU)
Primary Memory Systems
Secondary Storage Devices
Fundamentals of Data and Information
Number Systems in Computing
Binary and Decimal Conversions
The Hexadecimal Number System
Character Encoding Systems
Introduction to Operating Systems
Core Functions of an Operating System
Classification of Operating Systems
User Interface Paradigms
Case Studies of Operating Systems
Principles of the Communication Process
Data Transmission Speed and Media
Communication Types (Modes)
The Role of the Modem
Foundational Networking Concepts
Network Architecture Models
Essential Networking Devices
Network Classification by Scale
Network Topology
Introduction to the MS Word Environment
Text Basics and Formatting
Working with Objects
Document Structure and Organization
Managing Tables
Introduction to the MS Excel Environment
Formatting an Excel Workbook
Performing Calculations with Functions
Sorting and Filtering Data
Creating Effective Charts
Setting Up the PowerPoint Environment
Creating Slides and Applying Themes
Working with Multimedia
Animation and Slide Transition
Foundations of Cloud Computing
Cloud Delivery Models
Fundamentals of Cyber Security
Types of Cyber Security

An Overview of Artificial Intelligence (AI)
Key Subfields of AI
Introduction to the Internet of Things (IoT)
IoT Communication
Introduction to Data Science
Understanding Big Data
Fundamentals of Blockchain
Core Blockchain Concepts
Experiment 1
Experiment 2
Experiment 3
Experiment 4
Experiment 5
Experiment 6
Experiment 7
Experiment 8
Experiment 9
Experiment 10
Experiment 11
Experiment 12
Experiment 13
Experiment 14
Experiment 15
Experiment 16
Experiment 17
Experiment 18
Experiment 19
Experiment 20
Foundations of Computer Systems
The Role of Language Translators
Program Execution Lifecycle
Introduction to Programming Paradigms
Introduction to Algorithmic Thinking
Algorithm Representation Techniques
Developing Structured Algorithms
From Algorithm to Program
Genesis and Importance of C

Anatomy of a C Program
Core Language Elements
The C Preprocessor
Fundamental Data Types
Variables: Naming and Usage
User-Defined Data Types
Modifiers and Constants
Introduction to Expressions
Common Operator Groups
Expression Evaluation
Understanding Storage Classes
Scope and Lifetime Management
Basic Input and Output
Formatted Input and Output
Introduction to Control Flow Statements
Two-Way Branching
Multi-Way Branching
Other Control Constructs
Fundamentals of Iteration
Entry-Controlled Loops
Exit-Controlled and Nested Loops
Loop Control and Jumps
Introduction to Functions

Function Definition and Calls
Argument Passing Mechanisms
Advanced Function Topics
One-Dimensional Arrays
Multi-Dimensional Arrays
Character Arrays and Strings
Using Arrays with Functions
Pointer Fundamentals
Pointers in Use
Dynamic Memory Allocation
Advanced Pointer Topics
Introduction to Structures
Working with Structures
Structures and Functions
Unions
Basic Programs
Conditional Statements
For loop
functions
Nested loop
Switch case
while loop
Call by Value and Call by reference

Array of structure
Storage classes
Structure
Pointers
String
double dimensional
passing array to function
Recursion
enum
union
arrays single dimensional
do while loop
String functions
Structure of structure
INTRODUCTION
Introduction to Python
Program Structure
Data Types and Variables
Variables and Naming Conventions
Input and Output
Core Data Structures
Advanced Data Structures
Type Conversion and Casting
Operators in Python
Logical and Comparison Operators
Program Execution Lifecycle
Statements and Expressions
Operator Precedence and Associativity
Python Execution Environment
Debugging and Errors
Conditional Statements
Iteration and Loops
The for Loop

Control Flow Statements
Math and Randomness
Introduction to Arrays
String Basics
String Manipulation
String Operations and Formatting
String Indexing and Slicing
String Methods
String Validation Methods
String Splitting and Joining
The string Module
Regular Expressions (Introduction)
Lists as a Data Structure
List Manipulation
List Traversal and Operations
Summing Array Elements
Multi-dimensional Lists
Introduction to Searching
Binary Search
Comparison of Search Algorithms
Search and List Methods
Advanced Search Concepts
Introduction to Functions
Function Arguments
Argument Types
Scope and Lifetime
Anonymous and Recursive Functions
Introduction to OOP
Class Components
Constructors
Data Hiding and Abstraction
Encapsulation and Abstraction
Concepts of Inheritance
Method Overriding
Polymorphism with Inheritance
Abstract Classes
The MRO (Method Resolution Order)
File I/O
Command Line and Formatting
Error and Exception Handling
Modules and Packages
Illustrative Programs
LAB
LAB - 1

LAB - 2
LAB - 3
LAB - 4
LAB - 5
LAB - 6
LAB - 7
LAB - 8
LAB - 9
LAB - 10
LAB - 11
LAB - 12
Introduction
Foundations of Determinants
Minors and Cofactors
Expansion and Evaluation
Properties of Determinants
Introduction to Matrix Concepts
Advanced Matrix Types
Operations on Matrices
Adjoint and Inverse of a Matrix
PROBLEM - 1
PROBLEM - 2
PROBLEM - 3

PROBLEM - 4
Elementary Row Operations (ERO)
Rank of a Matrix
Systems of Linear Simultaneous Equations
Solving Systems using ERO
PROBLEM - 1
PROBLEM - 2
Core Concepts of Differentiation
Standard Differentiation Rules
Differentiation of Products and Quotients
Differentiation of Composite Functions
PROBLEM - 1
Logarithmic Differentiation
Differentiation of Implicit Functions
Differentiation of Parametric Equations
Successive Differentiation and nth Derivatives
PROBLEM - 1
PROBLEM - 2
PROBLEM - 3
PROBLEM - 4
PROBLEM - 5
Foundations of Calculus
Rolle's Theorem

Lagrange's Mean Value Theorem (LMVT)
Taylor and Maclaurin's Series
Monotonicity and Concavity
Maxima and Minima
Applied Optimization Problems
Vector and Scalar Fundamentals
Vector Addition
Multiplication by a Scalar
Scalar (Dot) Product of Two Vectors
Physical Application of Dot Product
Vector (Cross) Product of Two Vectors
Applications of Cross Product
Scalar Triple Product (STP)
Properties of the Scalar Triple Product
Vector Triple Product (VTP)
Further Vector Products
Introduction to the Complex Number System
Algebraic Operations
Modulus and Amplitude
Properties and Geometric Effects
Polar and Exponential Forms
De Moivre's Theorem
Roots of a Complex Number

Advanced Applications
Foundations of the Internet
Core Internet Terminology
Internet Connectivity
Internet Applications
Data Over the Internet
Introduction to Digital Communication
Electronic Mail (Email) Fundamentals
Email Client Operations
Analysis of Email Communication
Instant Messaging (IM)
Fundamentals of the World Wide Web
Web Browsing Software
Web Navigation and Search
Search Engines
Overview of Web-Based Converters
Introduction to Web Markup
Evolution of HTML
Anatomy of an HTML Document
HTML Attributes
Structuring HTML
Introduction to Information Organization
Implementing HTML Lists

Advanced List Structures
Working with Hyperlinks
Link Pathnames
Fundamentals of Text Formatting
HTML Elements for Text Style
Structural Text Elements
Special Characters
Character Formatting Using CSS
Fundamentals of Cascading Style Sheets
Including CSS in a Page
CSS Selectors
Units of Measure and Color
The CSS Box Model
Browser Developer Tools
Introduction to Web Images
Implementing Images in HTML
Images and Layout
Advanced Image Techniques
Building HTML Tables
Sizing and Styling Tables
Introduction to Positioning Schemes
Static and Relative Positioning
Absolute and Fixed Positioning

Stacking and Visibility
Practical Application: Drop-Down Menus
Fundamentals of HTML Forms
Form Controls and Labels
Common Input Types
Other Form Controls
Structuring and Grouping Controls
HTML5 Form Enhancements
Applying CSS to Form Elements
Basics of Internet and Web Design Case Study_1
Basics of Internet and Web Design Case Study_2
Basics of Internet and Web Design Case Study_3
Basics of Internet and Web Design Case Study_4
Basics of Internet and Web Design Case Study_5
Basics of Internet and Web Design Case Study_6
INTRODUCTION
Fundamentals of Environmental Studies
Fundamentals of Environmental Studies - Part I
Components of Environment
Sustainability Concepts
Importance of Environmental Studies
Introduction to Ecosystems
Structure of Ecosystems

Energy Flow in Ecosystems
Case Studies of Ecosystems
Introduction to Natural Resources
Land Resources
Water Resources
Air and Climate Systems
Energy Resources
Introduction to Biodiversity
Indian Biodiversity
Threats to Biodiversity
Biodiversity Conservation
Introduction to Pollution
Types of Pollution
Nuclear Hazards
Waste Management
Global Environmental Issues
Environmental Laws and Frameworks
Chemical Weapons Convention
Contemporary Environmental Governance
Introduction to Human-Environment Relationship
Resource Utilization by Communities
Resettlement and Rehabilitation
Disaster Management

Introduction to Environmental Movements
Major Environmental Movements in India
Environmental Ethics
Contemporary Relevance and Challenges
Introduction to Environmental Communication
Public Awareness Campaigns
Education and Participation
INTRODUCTION
Introduction to Computers
Basic Organization of a Computer
Data Representation
Classification of Computers
Introduction to Memory
Random Access Memory (RAM)
Read-Only Memory (ROM)
Cache Memory
Introduction and Classification
Magnetic Storage Devices
Optical Storage and Flash Memory
Mass Storage Devices
Introduction and Classification
Direct Data Entry Devices
Human Interface Devices

Introduction and Classification
Monitors (CRT and LCD)
Specialized Visual and Audio Output
Projection and Interactive Devices
Introduction to Computer Programs
Algorithm
Flowchart
Structured Programming Concepts
Programming Languages
Generation of Programming Languages
Features of a Good Programming Language
Software
Word Processing Software
Introduction to Presentation Software
Enhancing the Presentation
Spreadsheet Software
Formulas and Functions
Charts and Data Management
Microsoft Access and Database Objects
Introduction to Artificial Intelligence (AI)
Introduction to Internet of Things (IoT)
Cloud Computing
Big Data and Data Science

Introduction to Travel Agency Concepts
Introduction to Travel Agency Concepts - Part I
Pioneering Developments in Global Travel
History of Travel Agencies in India
Growth and Importance of the Sector
Classification of Travel Agencies
Introduction to the Present Status of Travel Agencies
Fundamentals of Organisational Structure
Organisational Structure of Small-Scale Agencies
Organisational Structure of Large/Standard Agencies
Analysis of the Functional Structure Model
Introduction to Industry Roles and Definitions
Core Differences: Travel Agency vs. Tour Operation
Regulatory Framework in India
Procedure for Approval of Travel Agency (DOT Rules)
Rules for Recognition of Tour Operator (DOT Rules)
Defining the Professional Travel Agent
Types of Travel Agents (Based on Business Model)
Types of Travel Agents (Based on Specialization)
Duties and Responsibilities of Travel Agents
Rights of Travel Agents
Introduction to Agency Functions
Information and Planning Functions

Core Operational Functions
Financial and Support Services
Specialized and Value-Added Services
Fundamentals of Itinerary Planning
Classification of Itineraries (By Structure)
Classification of Itineraries (By Traveller Type)
Planning and Preparing Tour Itineraries
Steps in Developing a Final Tour Itinerary
Introduction to Agency Revenue Models
Core Sources of Income
Ancillary and Specialized Income Streams
Tour Operator Revenue Management
On-line Agency Revenue Strategies
Introduction to Tour Operations
Types of Tour Operators (By Market)
Types of Tour Operators (By Function)
Role and Functions of Tour Operators
Rules and Conditions for Recognition (Recap)
Introduction to Package Formulation
Research and Development Phase
Sourcing and Vendor Management
Tour Costing and Financial Analysis
Tour Package Marketing

Introduction to the Tour Operation Lifecycle
Detailed Planning of Itinerary Components (Pre-Tour)
On-Tour Operations Management
Post-Tour Operation Functions
Introduction to Tourism Entrepreneurship
Basic Setup Requirements
Legal and Personnel Framework
Human Resource Qualifications
Operational Setup and Integration
INTRODUCTION
Foundations of Auditory Perception
Types and Levels of Listening
Barriers to Effective Listening
Strategies for Active Listening
Introduction to the Science of Speech Sounds
Vowels and Consonants
Suprasegmental Features
Aspects of Connected Speech
Fundamentals of Interpersonal Communication
Conversational Skills and Etiquette
Speaking in Group Contexts
Interviews and Questioning
Principles of Public Speaking

Delivery Techniques and Performance
Speeches for Specific Occasions
Using Visual and Audio-Visual Aids
Introduction to the Reading Process
Reading Techniques for Efficiency
Decoding Text Structure and Meaning
Building Vocabulary Through Reading
Core Concepts in Comprehension
Critical and Analytical Reading
Comprehending Various Text Types
Advanced Comprehension Strategies
Introduction to English Grammar Fundamentals
Advanced Grammatical Concepts
Common Errors and Punctuation
Vocabulary Building and Usage
The Writing Process and Principles
Paragraph and Essay Development
Professional and Business Writing
Academic Writing Skills
INTRODUCTION
Overview of Database Systems
Comparison with File Systems
Database System Environment

Database Concepts and Architecture
Overall Database Structure
Introduction to Data Models
Data Independence
Database Languages
Database Interfaces
Overall Database Structure
ER Model Fundamentals
Constraints and Keys
Advanced ER Concepts
Reduction of ER Diagrams to Tables
Extended ER Model
Introduction to the Relational Model
Relational Integrity Constraints
Referential Integrity
Relational Database Schemas
Data Abstraction and Views
Relational Algebra Fundamentals
Additional Relational Algebra Operations
Join Operations in Detail
Relational Algebra Queries
Relational Calculus
SQL Fundamentals

Types of SQL Commands
SQL Operators and Functions
Basic SQL Queries
Data Control Language (DCL) and Transaction Control Language (TCL)
Database Objects - Part I
Database Objects - Part II
Complex Queries and Subqueries
Aggregate Functions and Grouping
Joins and Set Operations
Data Manipulation Operations
Introduction to Dependencies
Normal Forms Fundamentals
Second and Third Normal Forms
Boyce-Codd Normal Form (BCNF)
Normalization Process
Further Dependency Concepts
Normalization with MVDs
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https://lms.suonline.ac.in/mod/url/view.php?id=11887	00:23:33
https://lms.suonline.ac.in/mod/url/view.php?id=11888	00:18:06
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SRINIVAS UNIVERSITY

CENTRE FOR DISTANCE & ONLINE EDUCATION

Minutes of BOS Meeting held on 25th February 2026 at 2.00 pm at Board Room

BOARD OF STUDIES OF COMPUTER APPLICATIONS

Members Present:

Name	Designation	Signature
Dr. Subramanya Bhat	Chair Person MCA/BCA (Hons)	
Dr. P. Sridhara Acharya	Member	
Ms. Swathi Kumari H	Member	
Ms. Anusha Rai	Member	
Mr. Srinivas Bhat, Diya systems, Mangalore	External Member	
Mr. Shailesh, IT head, SCDCC Bank, Mangalore	External Member	

AGENDA OF THE MEETING:

1. As per the recommendations from the UGC- DEB Expert Committee, to consider for the suggestions/improvement in line with the UGC- ODL & OL Regulations 2020 guidelines, approval of Program wise (Project proposal Report) PPR having the contents regarding the programme- Syllabus structure, Exams schema, Formative and Summative weightage, Assessment matrix, Mode of Examination of online Programmes MCA & BCA (Hons)
2. As per the recommendations from the UGC- DEB Expert Committee, to consider for the suggestions/improvement in line with the UGC- ODL & OL Regulations 2020 guidelines, approval of E- learning Material (ELM) subject wise of online Programmes MCA & BCA (Hons).

PROCEEDINGS OF THE MEETING:

The Meeting was presided by the Chairpersons of Respective Course - Coordinators

SL. NO.	AGENDA	RESOLUTION
1.	Approval of PPR of online Programmes. 1. MCA 2. BCA (Hons),	It was resolved to approve the CDOE Programmes Online mode- MCA & BCA (Hons) as per the guidelines of UGC - OL Regulations 2020 (Annexure of final Programme Project Report)

2.	Approval of E- learning Material (ELM) subject wise of online Programmes. 1. MCA 2. BCA (Hons).	It was resolved to Approve of E - Learning Material for the online Programmes MCA & BCA (Hons)
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To
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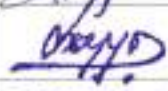
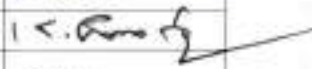
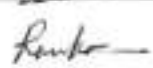
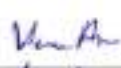
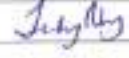


REGISTRAR
SRINIVAS UNIVERSITY
MANGALORE

SRINIVAS UNIVERSITY
MINUTES OF THE FORTIETH ACADEMIC COUNCIL MEETING
HELD ON 26/02/2026
Time: 11:30 A.M
Venue: COUNCIL ROOM, SRINIVAS UNIVERSITY, MUKKA
Meeting No.: AC/42/2025-26

The Forty second of Academic Council was held on 26th February, 2025 at 11.30 AM at Srinivas University under the Chairmanship of Hon'ble Vice-Chancellor

The following members were present in the meeting;

Sl. No	Name and Designation	Designation	Attendance
1.	Dr. K Satyanarayan Reddy Vice Chancellor	Chairperson	
2.	Prof. Dr. Anil Kumar Registrar	Secretary	
3.	Prof. Dr. Shrinivasa Mayya D Registrar - Evaluation	Ex-officio	
4.	Prof. Dr. Ajay K.G (Senior Faculty)	Member	
5.	Prof. Arpana Bhatta L. Finance Officer	Ex-officio	
6.	Dr. Jayashree R Bolar Asst. Registrar/IQAC Coordinator	Member	
7.	Dr Praveen B.M Research Director	Member	
8.	Dr. Suchetha Kumari N Director -Research & Development (Health Science)	Member	
9.	Dr. K Rama Narasihma, Director CDOE	Member	
10.	Prof. B. Prashanth Prabhu Hotel Management & Tourism	Member	
11.	Prof Shebin L	Member	
12.	Prof. Thrishala Noronha Dean- Physiotherapy	Member	
13.	Prof. Dr. Padmanabha C H Dean- Education,	Member	
14.	Prof. Ramakrishna N Hegde Dean- Engineering & Technology	Member	
15.	Prof. Pavana Krishnamurthy Dean- Allied Health Science	Member	
16.	Prof. Pavithra Kumari Chairman- Students' Redressal Committee	Member	
17.	Dr. Juby Mary Chacko Dean- Nursing Sciences	Member	
18.	Dr. Santhosh D.Shenoy	Member	

19.	Prof. Naveen Kumar J R	Member	<i>Naveen</i>
20.	Mr. Harischandra (Chief Librarian)	Member	<i>Harish</i>
21.	Dr. Udaya Kumar Rao	Member	<i>Ab</i>
22.	Mr. Krishnamurthy Reddy	Alumni Member	<i>KR</i>
23.	Ms. Anita Murthy	Alumni Member	<i>Ab</i>

PROCEEDINGS

At the beginning of the meeting the Registrar and Member Secretary welcomed the members to the 42th meeting of the Academic Council. The Registrar informed that the University looks forward to active contributions from all the members in helping the University to grow further. Later the agenda for the meeting was taken up for discussion.

1. To confirm the minutes of the 41st meeting of the Academic Council held on 23rd October 2025 was placed to the members and the same was unanimously passed by the Academic Council.
2. **Action Taken Report on the decisions of the 41st meeting of the Academic Council. -:**
The members were appraised of the action taken on the decisions made in the academic council meeting on 23rd October 2025
3. To consider the **recommendations from the UGC- DEB Expert Committee and to improve in line with the UGC ODL OL Regulations 2020 guidelines the Programme Project Report (PPR) including the Scheme of Studies and syllabi of the five programmes to be offered under Online mode from academic year 2025-26:**

The director CDOE presented the proposed PPR in the meeting along with the scheme of studies and syllabi of the Five online programmes prepared by the Board of Studies for Computer Applications and the Board of Studies for Management and Commerce to be offered from academic year 2025-26 subject to due approvals from UGC-DEB. The details of the programmes to be offered under the **online** mode are as follows:

S.No	Programmes to be offered under online mode.	Level of Programme
1	Master of Business Administration (MBA)	PG
2	Bachelor of Business Administration (Hons) (BBA)	UG
3	Bachelor of Commerce (Hons) (B. Com)	UG
4	Master of Computer Application (MCA)	PG
5	Bachelor of Computer Application (Hons) (BCA)	UG

Resolved: To approve and recommend for ratification the PPR by BOM

4. To approve the E-Learning Material (ELM) of the MBA, MCA, B. Com (Hons), BCA(Hons) and BBA (Hons) Programmes to be offered through Online mode as prepared by the respective Board of Studies.

The Director CDOE presented the E-Learning Material prepared by the Board of studies of Management and Commerce for the MBA/BBA/B. Com Programmes to be offered in Online mode. He also presented the E-Learning Material prepared by the Board of Studies of Computer Application for MCA/BCA to be offered in the Online mode. The members appreciated the efforts of the faculty and members of the board of studies and approve and recommended the same.

Resolved: To accept and recommend the E-Learning Material (ELM) of the MBA, MCA, B. Com (Hons), BCA(Hons) and BBA (Hons) Programmes to be offered through Online mode as prepared by the respective Board of Studies

5. To ensure minimum 70% weightage to end semester end examination for the Programmes MBA/ BBA/B. Com in online mode and for all five programs offered in Online mode:

The Director CDOE proposed that in line with existing regulatory framework the semester end/Term end examinations of the five Programmes offered under the Online mode will have 70% weightage and whereas the formative or continuous assessment(internal) weightage will be 30% for all the Programmes.

Resolved: The members approved and recommended that the Semester End/Term End examination will carry 70% weightage and the remaining 30% will be assigned to formative or continuous assessment (Internal).



Dr. K Satyanarayan Reddy

Vice-Chancellor

VICE-CHANCELLOR

Srinivas University

**Mukka, Mangalore - 574 145, D.K,
Karnataka, India**



Office of the Registrar

SU/Reg/BOM-58/EXTRACT

03/02/2026

EXTRACT BOARD OF MANAGEMENT MINUTES

Extract of the meetings of the Board of Management of Srinivas University duly convened at which a proper quorum was present on 28th February 2026 (Meeting Number: BOM/58/2026) in the University Council Room.

Members Present:

- | | |
|--|-------------|
| 1. Dr. K Satyanarayan Reddy, Vice-Chancellor | Chairperson |
| 2. Prof. Dr. Shrinivasa Mayya D, Registrar Evaluation | Member |
| 3. Dr. Anil Kumar, Registrar | Secretary |
| 4. Dr. Ajay K.G Sponsoring Body Nominee | Member |
| 5. Prof. Arpana Bhatta, Sponsoring Body Nominee | Member |
| 6. Dr. Jayashree R Bolar, Asst. Registrar/IQAC Coordinator | Member |
| 7. Prof. Ramakrishna N Hegde, Vice –Chancellor's Nominee | Member |

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Agenda 1: Reconfirmation of the minutes of the 54th Meeting of the Board of Management held on 27th September, 2025 regarding Online programmes offered through UGC-DEB.

The Vice Chancellor explained that the Minutes of the meetings were sent to all the members and no comments were received from any member. He asked the Registrar to read the minutes. He also said that a copy of the Minutes of the meeting is attached for information. The members were requested to place before the house if there are any comments. The Pro-Chancellor pointed out that the discussion on the implementation of NEP for the courses proposed to be offered under **ONLINE** mode needs to specify the duration of the programme.

Accordingly, the members discussed the same and approved the following

S.No	Programme	Level	Duration as per NEP
1	BBA (Hons)	UG	4 Years
2	BCA (Hons)	UG	4 Years
3	B. Com (Hons)	UG	4 Years
4	MBA	PG	2 Years

5	MCA	PG	2 Years
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Resolved: The members resolved to follow NEP for the online programmes of MBA, MCA, B. Com (Hons), BCA(Hons) and BBA (Hons) as it is already followed in the conventional mode.

Agenda 2: As per the recommendations from the UGC- DEB Expert Committee, to consider for the suggestions/improvement in line with the UGC ODL OL Regulations 2020 guidelines, and recommend the Programme Project Report (PPR) including the Scheme of Studies and syllabi of the five programmes to be offered under Online mode from academic year 2025-26:

The Registrar presented the Academic Council recommendation to approve the proposed PPR along with the scheme of studies and syllabi of the Five online programmes prepared by the Board of Studies for Computer Applications and the Board of Studies for Management and Commerce to be offered from academic year 2025-26 subject to due approvals from UGC-DEB. The details of the programmes to be offered under the **ONLINE** mode are as follows:

S.No	PPR's of the Programmes to be offered under online mode.	Level of Programme
1	Master of Business Administration (MBA)	PG
2	Bachelor of Business Administration (Hons) (BBA)	UG
3	Bachelor of Commerce (Hons) (B. Com)	UG
4	Master of Computer Application (MCA)	PG
5	Bachelor of Computer Application (Hons) (BCA)	UG

Resolved: To approve and recommend the Programme Project Report (PPR) of all the five programmes through online mode forwarded by the Academic Council.

Agenda 3: To approve the e-Learning Material (ELM) of the MBA, MCA, B. Com (Hons), BCA(Hons) and BBA (Hons) programmes to be offered through Online mode as prepared by the Board of Studies of Management and Commerce (MBA, BBA & B. Com) & Board of Studies of computer applications (MCA & BCA) which has been passed through academic council

The Registrar presented the e-Learning Material prepared by the Board of Studies of Management & commerce for the programme's MBA/BBA/B. Com programmes by online mode. He also presented the e-Learning Material prepared by the Board of Studies of Computer Application for MCA/BCA which is recommended by the Academic Council for offering in the online mode.

The members appreciated the efforts of the faculty and members of the board of studies and accepted the recommendation of the Academic council to approve the same.

Resolved: To accept and recommend the e-Learning Material (ELM) of the MBA, MCA, B. Com (Hons), BCA(Hons) and BBA (Hons) programmes to be offered through Online mode as prepared by the Board of Studies and recommended by the Academic Council.

Agenda 4: To ensure minimum 70% weightage to end semester examination for the MBA, MCA, B. Com (Hons), BCA(Hons) and BBA (Hons) programmes offered in Online mode:

The Registrar presented that in line with existing regulatory framework the semester end/Term end examinations of the five programmes offered under the Online mode will have 70% weightage and whereas the formative or continuous assessment(internal) weightage will be 30% for all the programmes. He stated that the same has been accepted and recommended by the Academic Council.

Resolved: The members approved and recommended that the Semester End/Term End examination will carry 70% weightage and the remaining 30% will be assigned to formative or continuous assessment (Internal) as recommended by the Academic Council for all the five MBA, MCA, B. Com (Hons), BCA(Hons) and BBA (Hons) programmes offered in Online mode.

//Certified True Copy//

For Srinivas University


Dr. Anil Kumar

Registrar

SRINIVAS UNIVERSITY
MANGALORE



SRINIVAS UNIVERSITY

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E-mail: info@srinivasuniversity.edu.in website:www.srinivasuniversity.edu.in



Office of the registrar
SU/REG/CDOE-162/2026

Date: 11-03-2026

To whomsoever it may concern

This is to certify that Srinivas University, Mangalore will ensure full compliance with the UGC guidelines recommended for 4 year Under Graduate Programmes as per NEP 2020. This includes meticulous adherence to the development and implementation of the curriculum framework as per the curriculum and Credit Framework for Undergraduate Programmes, as well as the preparation of study material in accordance with the guidelines set forth by the University Grants Commission-2020.


Director
Center for Distance and Online Education
Srinivas University, Mangalore
DIRECTOR
CDOE
SRINIVAS UNIVERSITY


Registrar
REGISTRAR
SRINIVAS UNIVERSITY
MANGALORE