Advertisement
SIKSHA 'O' ANUSANDHAN
(Deemed to be University)
Ph.D. Programme (2020-2021)

Siksha 'O' Anusandhan (Deemed to be University), Bhubaneswar, since its inception in 2007 has been at the forefront of nourishing a learning ambience, encouraging academic research and innovations, and developing well qualified people in all domains. It has been accredited twice by NAAC with 'A' Grade and has been placed as 24th best University in the country by NIRF ranking in 2019. Besides, Siksha 'O' Anusandhan (Deemed to be University) has been granted graded autonomy status in 2018. Its Faculty of Engineering and Technology is placed at 32nd and Faculty of the Medical Sciences is placed at 20th by NIRF, Govt of India. Times Higher Education (THE) World University ranking 2020 has ranked its Engineering and Technology, Computer Sciences & Health science in 601 + bracket. Besides, in QS India Ranking Siksha 'O' Anusandhan (Deemed to be University) is placed within top 50 among Indian Universities.

Admission to Ph.D. programme for January 2020 session is open to **FULL TIME and PART TIME** research scholar applicants, in the faculty of Engineering, Sciences, Pharmaceutical sciences, Medical Sciences, Dental Science, Biotechnology, Nursing, Hospitality and Tourism Management, Law and Agricultural sciences. Besides, the Ph.D. program is also open to the different departments of Sciences and Humanities and Social sciences. Ph. D. students will also be admitted to different centers such as Center of Excellence in Theoretical and Mathematical science (CETMS), Center of Nano Science and Nano Technology, Center of Biotechnology, Centre for Bio-fuels and Bio processing and others. CETMS is primarily focusing on conducting advanced theoretical and experimental research.

Fellowship of Rs. 20000/- per month will be awarded to deserving full time research scholars.

Ph.D (Full –Time / Part-Time)

GENERAL INFORMATION

1. Applications are invited for admission into Research Programme offered by SOA Deemed to be University in the subject areas as indicated in **Appendix-I**.
2. Candidates belonging to the following categories need not appear for the written Test but need to appear personal interview.
   i. Those who have qualified and possess a valid score in UGC-Net/UGC-CSIR NET (including JRF)/ ICMR/GATE/GPAT/SLET/ teacher Fellowship.
   ii. Those with M.Phil Degree.
3. Candidates admitted into Full-time Ph.D programme should not undertake any assignment/ employment or shall not pursue any other full-time programme of study simultaneously.
4. The last date for submission of application is **15th January 2020.**
5. SOA reserves the right to admit or not to admit the candidates into any research programme.

HOW TO APPLY

1. Candidates have to submit application online www.soa.ac.in, For details and instructions, please visit SIKSHA 'O' ANUSANDHAN web site: **www.soa.ac.in**
2. Dean (R & D) office will not take any responsibility for the non receipt of application on time.
3. After filling the online form, a form will be generated and will be available in your mail. You have to take a hard copy of the same and submit the application form to the office of the Dean (R &D) along with all relevant documents.

ADMISSION INFORMATION

1. Admission shall be based on the marks secured in the written Test and Interview, subject to the fulfillment of the eligibility criteria and the rules of reservation.
2. The following certificates are to be submitted along with online application
   (a) Date birth (SSC/ Matriculation or Equivalent certificates)
   (b) Postgraduate Degree/ M.Phil. Degree or Provisional Certificates as applicable
   (c) NET/ICMR/ GATE/ GPAT/ SLET etc. valid scores, if applicable
3. The following Certificates (In original) are to be presented at the time of admission for verification:
   (a) Postgraduate Degree/ M.Phil Degree or Provisional certificates as applicable.
   (b) Marks Statement of the qualifying examination
   (c) Transfer and Conduct certificate from the Institute where the candidate last studied.
   (d) NET/ICMR/GATE/GPAT/SLET etc. valid scores, if applicable.
   (e) Migration certificate (for candidates from other than the SOA (Deemed to be University).
   (f) Date of Birth (SSC/Matriculation or equivalent Certificates).
   (g) Integrated community certificate issued by the competent authority in case of SC/ST candidates.
   (h) Medical Certificate from not below the rank of a Civil Surgeon in case of PHC.
   (i) Physical Fitness certificate.
   (j) Service certificate and "No Objection" certificate from the present employer (for part-time candidates only.)

ADMISSION PROCESS

Candidates will have to qualify through Written Test and personal interview taken together.

Admission into Ph.D. Programmes
Eligibility criteria

Faculty of Management Sciences

Discipline	Eligibility
Business Administration	MBA/ PGDM/ (AICTE approved)/ M. Com./ MA in Economics/ PMIR/ M. Tech industrial Engg. / Public administration, with 6.0 CGPA or 60 percent in aggregate. (Only for Business Administration)

Faculty of Hospitality and Tourism Management

Discipline	Eligibility
Hospitality and Tourism Management	MHMCT/MHM/MMTM/MBA(HM/TM), M.Com./ MA (Tourism /history/geography) or in relevant discipline with CGPA 6.0 or 60 percent of marks in aggregate.

Faculty of Medical Science

Discipline	Eligibility
Medical Science	MD/MS in relevant discipline with 6.0 CGPA or 60 percent of marks in aggregate. MBBS (Medical Science with 5.5 CGPA or 55 percent of marks in aggregate. M. Sc. in Medical science in Clinical Psychology, Master in Occupational Therapy with 6.0 CGPA or 60 percent of marks in aggregate.

Faculty of Dental Science

Discipline	Eligibility
Dental Science	MDS in relevant discipline with 6.0 CGPA or 60 percent of marks in aggregate. BDS (Dental Science) with CGPA 6.00 or 60 percent marks in aggregate.

Faculty of Pharmaceutical Sciences

Discipline	Eligibility
Pharmaceutical Sciences	M.Pharm. in relevant discipline with CGPA 6.00 or 60 percent of marks in aggregate.

Faculty of Legal Studies

Discipline	Eligibility
Law	LLM in relevant discipline with a minimum of 6.00 CGPA in a 10-point scale or 60 percent of marks in aggregate.

Faculty of Nursing

Discipline	Eligibility
Nursing	M.Sc. in Nursing or relevant discipline with CGPA of 6.00 or 60 percent of marks in aggregate.

Faculty of Agriculture Sciences

Discipline	Eligibility
Agriculture **Sciences**	M.Sc. (Ag.)/ M. Sc. (Hort.) degree in relevant discipline with CGPA of 6.00 or 60 percent of marks in aggregate. B. Sc. (Ag.)/ B. Sc. (Hort.) relevant its equivalent with CGPA of 7.0 or 70 percent and above marks in aggregate and one publication in a reputed National Journal and one in reputed International Journal and minimum work experience of 2 years.

Centre for Biotechnology

Discipline	Eligibility
Biotechnology	M.Sc. in Biotechnology or relevant discipline with CGPA of 6.00 or 60 percent of marks in aggregate.

Faculty of Engineering

Civil Engineering		
1.	Civil Engineering	M.Tech/ M.E or Equivalent Degree in the concerned branch with CGPA of 6.00 or 60 percent of marks in aggregate. B.E./ B.Tech. /AMIE in relevant branch of Engineering or its equivalent with CGPA of 7.0 or 70 percent and above marks in aggregate and one publication in a reputed National Journal and one in reputed International Journal and minimum work experience of 2 years.
Computer Science & Engineering		
2.	Computer Science & Engineering	M.Tech/ M.E or Equivalent Degree in the concerned branch with CGPA of 6.00 or 60 percent of marks in aggregate. B.E./ B.Tech. /AMIE/MCA relevant in any branch of Engineering or its equivalent with CGPA of 7.0 or 70 percent and above marks in aggregate and one publication in a reputed National Journal and one in reputed International Journal and minimum work experience of 2 years.
Electronics & Communication Engineering		
3.	Electronic & Communication engineering	M.Tech/ M.E or Equivalent Degree in the concerned branch with CGPA of 6.00 or 60 percent of marks in aggregate. B.E./ B.Tech. /AMIE in relevant branch of Engineering or its equivalent with CGPA of 7.0 or 70 percent and above marks in aggregate and one publication in a reputed National Journal and one in reputed International Journal and minimum work experience of 2 years.
Electrical Engineering		
4.	**Electrical Engineering**	M.Tech/ M.E or Equivalent Degree in the concerned branch. with CGPA 6.00 or 60 percent of marks in aggregate. B.E./ B.Tech. /AMIE in relevant branch of Engineering or its equivalent with CGPA of 7.0 or 70 percent and above marks in aggregate and one publication in a reputed National Journal and one in reputed International Journal and minimum work experience of 2 years.
Mechanical engineering		
5.	Mechanical Engineering	M.Tech/ M.E or Equivalent Degree in the concerned branch with CGPA of 6.00 or 60 percent of marks in aggregate. B.E./ B.Tech. /AMIE in relevant branch of Engineering or its equivalent with CGPA of 7.0 or 70 percent and above marks in

		aggregate and one publication in a reputed National Journal and one in reputed International Journal and minimum work experience of 2 years.
Chemistry		
6.	Chemistry	M.Sc. degree in Chemistry (any specialization) with CGPA of 6.00 or 60 percent marks in aggregate.
	Environmental Science	M.Sc. degree in Environmental Science/ chemistry / Biotechnology / Life Science with CGPA of 6.00 or 60 percent of marks in aggregate.
Centre of Nano Science and Nano Technology		
7.	Chemistry, Environmental Chemistry, Materials Science and Physics	M.Sc. in Chemistry/Physics/Environmental Chemistry/ Materials Science with CGPA of 6.00 or 60 percent of marks in aggregate.
Physics		
8.	Physics	M.Sc. degree in Physics (any specialization) with CGPA of 6.00 or 60 percent marks in aggregate.
Mathematics		
9.	Mathematics	M.Sc. degree in Mathematics (any specialization) with CGPA of 6.00 or 60 percent marks in aggregate.
Centre for Applied Mathematics and Computing		
10.	Mathematics	M.Sc. degree in Mathematics (any specialization) with CGPA of 6.00 or 60 percent marks in aggregate.
Humanities & Social Science		
11.	Humanities & Social Science	M.A. in English / Economics/ Library and Information Science / Literature with CGPA of 5.5 or 55 percent of marks in aggregate.
Centre of Excellence in Theoretical and Mathematical Science		
12.	Centre of Excellence in Theoretical and Mathematical Science	M.Sc. degree in Physics (any specialization) with CGPA of 6.00 or 60 percent of marks in aggregate.
Bio-fuels and Bio processing Research Centre		
13.	Bio-fuels and Bio processing Research Centre	M.Sc. degree in Chemistry/ Biotechnology/ Microbiology or in relevant discipline with CGPA of 6.00 or 60 percent of marks in aggregate.

Please Note:

- **The candidates belonging to SC/ST category shall be given a relaxation of 5% marks at Master level.**
- **Any mandatory regulation periodically notified by the UGC shall be applicable.**

DETAILS OF THE ENTRANCE TEST

1. The duration of the test is one hour.
2. Written test is having 50 percent weightage. It contains 12 questions from Research methodology and 12 questions from relevant branches.
3. Interview is having 50 percent weightage. It contains of 20 percent weightage for personal interview, 10 percent weightage for research publication, 10 percent weightage for career and 10 percent weightage for research proposal.
4. The merit list for admission shall be prepared on the basis of marks obtained together in the written test and interview.

The following is the list of different disciplines and broad areas of research with the number of intended intake in respective disciplines.

Appendix-I

Faculty of Management sciences Full Time:1 Part Time:2	:	Operations Management, Financial Engineering. Organisation Culture, Service Quality.
Hospitality and Tourism Management Full Time: 1 Part Time:1	:	Hospitality management and tourism management, Tourism and Travel Management, Event Management.
Institute of Medical Science Full Time:1 Part Time:1	:	Community Health Development, Medical Physiology, Medical Biochemistry, Endocrinology
Institute of Dental Sciences Full Time:1 Part Time:1	:	Dental Caries, Infant Oral Health Care, Management of Trauma in Children Head and Neck Oncology, Genetic regulation in Head & neck region, Forensic Odontology, Normal development and its disturbances in the Oral Cavity, Non-Surgical Periodontal Therapy, Preventive Dentistry, Dental Public Health. Head & neck Imaging.
Faculty of Pharmaceutical sciences Full Time:2 Part Time:1	:	Development of Target Specific Novel Drug Delivery Systems For Localized Drug Delivery, Stability assessment of Ayush/Ayurvedic /Herbal formulations, Development of SOP for manufacture and quality control of Ayush/Ayurvedic/Herbal formulations, Pharmacological Studies , Novel drug delivery system , Herbal technology, Drug designing and Synthesis , New method development, Localized M.R herbal drug delivery.
Faculty of Legal Studies Full Time:1	:	Criminal Law and Civil Law
Faculty of Nursing Full Time: 1 Part Time:1	:	Nursing
Faculty of Agriculture sciences Full Time: 2 Part Time:1	:	Agronomy, Horticulture, Plant Pathology, Vegetable Science, Fruit science, floriculture, & Landscaping, Soil science & agriculture Chemistry
Centre for biotechnology Full Time: 3 Part Time:1	:	Chemotyping and Genotyping, Genomics, Metabolomics, and transcriptomics, Neurobiology, Microbiology

Electrical Engineering Full Time:3 Part Time:1	:	Distributed renewable power generation, Power system operation and planning, Energy storage in smart grids, Power System operation and scheduling, Solar power system, Soft computing applications in power systems Control systems, Microgrid Protection and Control.
Electronics Communication Engineering. Full Time:1 Part Time:1	:	Communication systems and networks (RF & Optical Domain), Wireless Communication, Data telemetric system, Antenna-Design and Analysis. Signal and image processing, speech processing, biomedical signal and Image processing, Optical Signal Processing, Computer vision, Machine Learning. **Devices:** Modeling and Analysis of Electronic Devices (VLSI, HEMT, MOSFET), sensors, actuators, embedded systems.
Mechanical Engineering Full Time:1 Part Time:1	:	Composite material, Fracture Mechanics, Fuel and Energy, Application of nano-fluids in heat transfer, Nanofluids Multi-Phase fluid flow and Heat transfer, Solidification and casting, Additive manufacturing, Supply chain, metal casting, welding, machining, Manufacturing system engineering, Development of composite electrodes for high performance supercapacitor application, Metal working (Forging), Polymer Nanocomposites for energy application, 2D materials.
Civil Engineering Full Time:1 Part Time:1	:	Geoinformatics, Geotechnical Engineering, Structural Engineering, Atmospheric Science, Weather and Climate variability, Climate Change, Traffic Planning and Highway Engineering, Water Resources Engineering.
Computer Sc. & Engineering Full Time:2 Part Time:1	:	Software Testing, Natural Language Processing, Cloud Computing, Internet of Things, Business Intelligence, Data Mining and Bio-informatics, Medical image processing and Machine Learning.
Chemistry Full Time:2 Part Time:1 **Environmental science**	:	Solvent extraction and separation of rare earths and transition metals. Molecular interaction studies. Synthesis and characterization of hydrogel nanoparticles and films for bio medical application. Physico–chemical studies of solute-solvent interactions in solutions. Computational material science. SAR/QSPR models. Conducting polymer nanocomposites. Cutting edge nanocatalyst/photocatalyst for energy generation, environmental clean-up and organic transformation. Polymer nanocomposites for energy saving, solar cell, EMI shielding and photocatalysis applications Environmental monitoring, remediation and waste utilization. Bioremediation of wastewater and eco-toxicological evaluation. Ambient and Stack air quality monitoring and modeling. Photocatalytic/ Microbial system for pollutant degradation, Carbon sequestration to fuel, Sensor & Bio sensor
Centre of Nano science and Nano Technology Full Time:1 Part Time:1		Advanced functional materials for energy generation, energy storage, catalysis, photocatalysis, electrocatalysis, adsorption studies, organic transformation reactions for fine chemical synthesis and environmental applications for organic and

		inorganic pollutant abatement.
Physics Full Time:2 Part Time:1	:	**Theoretical**-- Nuclear Physics, High Energy Physics (Phenomenological Studies on Decays of Hardrons within Standard Model Framework), Condensed Matter Physics, Photonics, Photoreceptor Optics, Quantum Physics (Interdisciplinary); High-Tc Superconductors **Experimental-** Condensed Matter Physics, Material Science.
Mathematics Full Time:1 Part Time:1	:	Convex optimization, Numerical optimization, Optimization with uncertainty, Portfolio optimization, Variation & complimentary problem, Set valued optimization, Inventory Management, Decision Theory, Non-linear programming, Probabilistic LPP, Multi objective programming, Differential equation with uncertainty, Functional differential equation, Fractional differential equation, Difference Equation, Discrete dynamic system, Numerical solution of partial differential equation, Statistical Decision theory, Estimation Theory, Random polynomials , Heat and mass transfer, Thermal enhancement in Nanofluid, Statistical analysis of Nanofluid Properties, Flow through porus medium, magneto hydrodynamics, Graph labeling, Graph coloring, Spectral graph theory, Graphs, similarity, Polynomial of Graphs., Theoretical study on basic plasma, Non linear wave equation, Finite Geometry, Projective Geometry.
Humanities & social Science Full Time: 1 Part Time:1		**English:** Media & Communication Studies, Gender Studies & Contemporary theory, Linguistic & ELT **Behavioral Sciences:** Organisational behavior& Human Resource Management **Economics**: Developmental Economics, Public Economics Rural Development, Environmental Economics, Sustainable Development
Center of Excellence in Theoretical and Mathematical Science (focus on advanced physics Research in theory and Experiments) Full Time:1 Part Time:1	:	High Energy Physics Theory and Phenomenology, Neutrino Physics, the Physics of Dark Matter, Collider Physics. Neutrinos from the sky, Origin of masses and mixings, WIMP as dark matter, Physics of decaying dark matter, Confronting limitations of the standard model, Gauge and non Gauge extensions, Origin of Gauge and Fermion mass hierarchies, Baryon asymmetry of the universe, Titanium based materials, Calcium phosphate based materials, Chitosan, Gelatin, Collagen and other Biopolymers, Ceramic and Polymeric based Scaffolds, Bioinformatics, Dental and Orthopaedic Implants, Osteoblast and Stem cell culture, Bacteria culture, Ion implantation of biocompatible elements, Elemental analysis using PIXE, EDXRF.
Center for Applied Mathematics & computing Full Time:1 Part Time:1	:	Nonlinear Wave in Plasma, Numerical solution of Partial Differential equation, Particular Galerkin Method, Finite Element Analysis.
Bio-fuels and Bio processing research Center Full Time:1 Part Time:1	:	Biotechnology, Microbiology, Leaching, Solvent extraction and Precipitation of non-ferrous and rare earth metals from ores and wastes

Contact us:

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IMPORTANT DATES

Last date for Submission of Application online : **15th January 2020.**
Dates for Written Tests & Interview : **24.01.2020 & 25.01.2020**

FEES FOR Ph.D. PROGRAMME (FULL TIME)

Admission / Registration Fee/ Course Fee : Rs. 32,000/-
Annual Tuition fee : Rs. 25,000/-
Thesis Examination Fee : Rs. 15,000/-

FEES FOR Ph.D. PROGRAMME (PART TIME)

Admission / Registration Fee/ Course Fee : Rs. 47,000/-
Annual Tuition fee : Rs. 40,000/-
Thesis Examination Fee : Rs. 15,000/-