

VEER SURENDRA SAI UNIVERSITY OF TECHNOLOGY, BURLA SAMBALPUR – 768018, ODISHA, INDIA

VSSUT/PGSR/7/9 / 2021

Date: 14.04.2021

ADMISSION INTO Ph.D. PROGRAMMES: AUTUMN-2021 INFORMATION TO CANDIDATES

Applications are invited for admission into various Ph.D Programmes offered by the VSSUT, Burla in the following Disciplines/Department/Specialization as per existing vacancies.

SI. No.	Disciplines	Department	Specialization
No.	Engineering	Chemical Engineering	Chemical Engineering and allied branches including Biochemical Engineering, Biomedical Engineering, Biotechnology, Ceramics Engineering, Food Engineering, Nanotechnology, Environmental Engineering, Plastics Engineering, Polymer Engineering/Technology, Pulp and paper Technology
		Civil Engineering	Structural Engineering, Water Resource Engineering, Transportation Engineering, Geotechnical Engineering, Environmental Science & Engineering
		Computer Science & Engineering	Embedded System Networking, Online Algorithms and Data Structures, Wireless Sensor Networks, Database and Applications Security, Network Security, Data Analytics, Cloud Computing, Software Defined Networks
		Electrical Engineering	Control System, Power Systems, Energy Management. Signal Process, Power System, Instrumentation/ Automation, Power System & Control
		Electronics & Telecommunication Engineering	Signal Processing, Automation & Computer Vision, Antenna Engineering, Wireless Communication, Electronic Systems & Communication I P, Microwave Engineering, Computer Vision & Recognition of Digital Images L S I
		Information Technology	Soft Computing, Evolution Computation, Data Mining, Cloud Computing, Parallel Distributed ,Embedded Systems, Distributed Systems, Parallel and Distributed Computing, Machine Intelligence and Computer Vision, Image Security
		Mechanical Engineering	Vibration, Fatigue & Composites, Tribology M/c Design, Tribology Composites, Composites, Manufacturing, Design Analysis, Thermal, Production
		Metallurgy & Materials Engineering	Mechanical Metallurgy & Severe Plastic Deformation, Steel Matrix Composite, Powder Metallurgy, Nano Composite, Tribology, Electro Metallurgy, Creep, etc.
		Production Engineering	Production Engineering, System Design, Thermal Engineering, Design
		Chemistry	Organic, Industrial, Materials, Nanotechnology, Polymer
2		Computer Applications	Soft Computing and signal processing & Multi Processor Scheduling, Soft Computing, Image Processing(color image segmentation), Machine learning, Data Mining & Soft computing
		Mathematics	Fluid Dynamics, CAGD, Complex Analysis, Applied Fluid Dynamics, Functional analysis and Optimization, CFD
		Physics	Experimental Condensed Method Physics, Solid State Physics, Material Science/Ultrasonic, Nuclear Physics, Liquid Crystals, Computational Condensed Method Physics, Theoretical Physics
3	Humanities	Humanities (English)	American Literature and Business Communication



N.B:

- 1. Number of admission may depend on availability of specialization and suitable meritious students with research bent of mind.
- 2. The authority reserves the right to accept/reject any or all the applications or the entire selection process without assigning any reason thereof.

IMPORTANT DATES:

Last Date of online Application Form: 15.06.2021 (23 Hrs).

Last date of receipt of Hard copy of Application: 21.06.2021 (12 Noon)

Tentative Date of Entrance Test (Mode of Entrance Test), results of Entrance test, Date of Admission and any other information/updates will be hoisted on VSSUT website: www.vssut.ac.in.

ELIGIBILITY CRITERIA

The following are the required educational qualifications for admission into Ph.D Programmes

Sl. No.	Disciplines	Eligibility Criteria
1	Civil Engineering (CE)	M.Tech./ME/M.Sc.(Engg) in Civil Engineering/ Environmental Engineering/ Naval Architecture & Ocean Engg/ Aerospace Engg/ Building Science & Technology/ Construction Management
2	Mechanical Engineering (ME)	M.Tech/ME/M.Sc.(Engg) in Mechanical Engg./ Production Engineering/ Manufacturing Science & Engg./Industrial Engg./Metallurgy & Materials Engineering/Power Plant Engg.,Industrical Design Marine Engg./Automobile Engg./ Aerospace Engg.
3	Electrical Engineering (EE)	M.Tech/ME/M.Sc.(Engg) in Electrical Engg. Electrical & Electronics Engg./Electronics & Electrical Engg./ Instrumentation Engg. & Electronics & Instrumentation Engg.
4	Electrical & Electronics Engineering (EEE)	M.Tech/ME/M.Sc.(Engg) in Electrical Engg./ Electrical & Electronics Engg./Electronics & Electrical Engg/ Instrumentation Engg. & Electronics & Instrumentation Engg.
5	Electronics & Telecommication Engineering (ETC)	M.Tech/ME/M.Sc.(Engg) in Electronics & Instrumentation Engg./ Electronics & Telecommunication Engg/ Electronics & Communication Engg / Electrical & Electronics Engg./ Electronics & Electronics & Electronics & Electronics
6	Computer Science & Engineering (CSE)	M.Tech/ME/M.Sc.(Engg) in Computer Sc. & Engg./Information Technology
7	Information Technology (IT)	M.Tech/ME/M.Sc.(Engg) in Information Technology/ Computer Sc. & Engg.
8	Production Engineering (PE)	M.Tech/ME/M.Sc.(Engg) in Production Engg./ Mechanical Engineering/ Manufacturing Science & Engg./ Industrial Engg./ Metallurgy & Materials Engg/Industrical Design Engg./ Production & Industrial Engg/ Mechatronics Engg.
9	Metallurgical & Materials Engineering (MME)	M.Tech/ME/M.Sc.(Engg) in Metallurgy & Materials Engg/ Production Engg. / Manufacturing Science and Engineering/ Mechanical Engg./Industrial Engg.
10	Chemical Engineering (CHE)	M.Tech/ME/M.Sc.(Engg) in Chemical Engineering

11	Physics (PH)	M.Sc./ M.Phil./M.Sc.(Tech) in Physics/Material Science/ Computer Science/Electronics/Nano Technology/ Ballistic Physics
12	Chemistry (CH)	M.Sc./M.Phil/M.Sc.(Tech) in Chemistry, Environmental Science/ Material Science/Polymer/Plastic Technology/ Nano Chemistry
13	Mathematics (MA)	M.Sc. in Mathematics/Statistics/ Computer Science, M.Phil
14	Computer Application (CA)	MCA/ M.Sc./M.Tech in Computer Science/ Computer Application /Information Technology
14	Humanities (English) (ENG)	MA/M.Phil-in English
15	Architecture (ARCH)	M.Arch.

Ph.D (Engineering):

The eligibility criteria for admission to Ph.D Programme in Engineering are one of the following:

- M.Tech/M.E/M.Sc.(Engg) in relevant discipline with at least 60% marks in aggregate (or equivalent CGPA) at M.Tech level from an Institute/University recognized by AICTE/UGC/Central Government.
- (ii) Faculty members employed permanent positions of VSSUT, Burla having M.Tech in relevant discipline from an Institute/University recognized by AICTE/UGC/Central Government.
- (iii) Non-Teaching staff members employed on permanent positions of VSSUT, Burla for a period of at least 08 years out of which 03 years in existing post and having M.Tech in relevant discipline with at least 60% marks in aggregate (or equivalent CGPA) at M.Tech level from an Institute/ University recognized by AICTE/UGC/Central Government.

Ph.D (Science):

The eligibility criteria for admission to Ph.D Programme in Science are one of the following:

- (i) M.Phil /M.Tech. /M.S/ M.Sc. in relevant discipline with at least 60% marks in aggregate (or equivalent CGPA) from an Institute or University recognized by AICTE/UGC/Central Government.
- (ii) MCA with at least 65% marks in aggregate (or equivalent CGPA) at MCA level from an Institute or University recognized by AICTE/UGC/Central Government..
- (iii) M.Tech with MCA in relevant discipline with at least 60% marks (or equivalent CGPA) at M.Tech/MCA level from an Institute or University recognized by AICTE/UGC/Central Government.
- (iv) Faculty members employed on permanent positions of VSSUT, Burla having M.Phil/M.Sc./MCA in relevant discipline from an Institute or University recognized by AICTE/UGC/Central Government..
- (v) Non-Teaching Staff members, employed on permanent positions for a period of at least 08 years out of which 03 years in the existing post and having M.Sc with 60%



- marks in aggregate (or equivalent CGPA) at M.Sc level from an Institute or University recognized by AICTE/UGC/Central Government.
- (vi) Non Teaching Staff Members, employed on permanent positions for a period of at least 08 years out of which 03 years in the existing post and having M.Tech with 60% marks in aggregate (or equivalent CGPA) at MCA/ M.Tech level or with 65% marks in aggregate (or equivalent CGPA) at MCA level from an Institute or University required by AICTE/UGC/Central Government.

Ph.D (English):

The eligibility criteria for admission to Ph.D Programme in Humanities and Social Science are one of the following:

- (i) M.Phil/MA in English with at least 60% marks in aggregate (or equivalent CGPA) from an Institute or University recognized by AICTE/UGC/Central Government.
- (ii) Faculty members employed on permanent positions of VSSUT. Burla having M.Phil/MA in English from an Institute or University recognized by AICTE/UGC/Central Government.
- (iii) Non-Teaching Staff members, employed on permanent positions for a period of at least 08 years out of which 03 years in the existing post and having M. Phil/MA in English with at least 60% marks in aggregate (or equivalent CGPA) at MA level from an Institute or University recognized by AICTE/UGC/Central Government.

The equivalent CGPA shall be computed as per the VSSUT Regulations without considering the conversion formula of the respective Institute/University.

Ph. D (Architecture):

The eligibility criteria for admission to Ph.D Programme in Architecture are one of the following:

- (i) Bachelor's Degree in Architecture / Planning or equivalent and Master's degree in Architecture / Planning / allied specialization or equivalent from an Institution / University recognized by Council of Architecture / AICTE / UGC / Central Government with at least 60% marks in aggregate (or equivalent CGPA) at Bachelors & Masters level.
- (ii) Faculty members employed in permanent positions of VSSUT, Burla having Bachelor's Degree in Architecture / Planning or equivalent and Master's degree in Architecture/Planning/ allied specialization or equivalent from an Institution/University recognized by Council of Architecture/AICTE/UGC/ Central Government.
- (iii) Non-Teaching staff members employed on permanent positions of VSSUT, Burla for a period of at least 08 years out of which 03 years in existing post and having Bachelor's Degree in Architecture / Planning or equivalent and Master's degree in Architecture / Planning / allied specialization or equivalent in relevant discipline with at least 60% marks in aggregate (or equivalent CGPA) at Bachelor's and

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Master's level from an Institute/ University recognized Council of Architecture/AICTE/UGC/Central Government.

SELECTION CRITERIA:

1. All categories of candidates except the categories 2 and 4 need to undergo the process of selection through the University Ph.D Selection Board based on overall academic career and interview. The candidates who have qualified GATE/ NET/ Inspired fellowship (DST)/ Teacher fellowship (UGC) and other fellowships from Govt. Agencies are exempted from the Written Test and they will be given preference in the selection of Ph.D admission. They are required to appear only interview before Selection Board to assess their research aptitude, ability to work in a team, subject interest and availability of supervisors and facilities in the Department before final selection. The Selection for the candidates in the categories 1, 3, 5, 6, 8 & 9, who have not qualified in GATE/ NET/ Inspired Fellowship (DST)/ Teacher Fellowship (UGC) and other fellowships from Govt. Agencies, shall have the following three components for General/SC/ST candidates as follows:

I.	Written Test: Written Test (Multiple Choice Questions) will be of 2 Hours Duration to qualify for appearing in Interview	100 Marks
	Qualifying Marks: 40% of the Total Marks (40 Marks)	
II.	Career Marks	60 Marks
III.	Interview*	40 Marks
,	*Clarity of research proposal: 10 Marks	
	Previous work/ Research publication in referred journals: 1	0 Marks
	Interview performance (Subject knowledge): 20 Marks	

Candidates should secure a minimum of 50 Marks out of the Total Marks of 100 (Carrier (60 Marks) and Interview (40 Marks)).

Distribution of Career Marks:

Ph.D (Engineering): (Full Marks: 60)

	Qualifying Examination	Weightage Marks
(i)	H.S.C/equivalent	: 10 Marks
	1st Class	: 10 Marks
	2 nd Class	: 06 Marks
	3 rd Class	: 04 Marks
(ii)	+2 Sc./Diploma/equivalent	: 10 Marks
	1st Class	: 10 Marks
	2 nd Class	: 06 Marks
	3 rd Class	: 04 Marks
(iii)	B.Tech/BE/B.Arch/equivalent	: 20 Marks
	80% and above	: 20 Marks



 75% and less than 80%
 : 18 Marks

 70% and less than 75%
 : 16 Marks

 65% and less than 70%
 : 14 Marks

 Less than 65%
 : 12 Marks

(iv) M.Tech/ME/M.Arch/equivalent: 20 Marks 80% and above : 20 Marks 75% and less than 80% : 18 Marks 70% and less than 75% : 16 Marks 65% and less than 70% : 14 Marks Less than 65% : 12 Marks

Ph.D (Science/Humanities): (Full Marks: 60)

(i)	H.S.C/equivalent	: 10 Marks
	1 st Class	: 10 Marks
	2 nd Class	: 06 Marks
	3 rd Class	: 04 Marks

- (ii)
 +2 Sc./Arts/equivalent
 : 10 Marks

 1st Class
 : 10 Marks

 2nd Class
 : 06 Marks

 3rd Class
 : 04 Marks

 : 04 Marks
- (iii) +3 Sc./Arts/B.Sc/BA/equivalent : 15 Marks
 1st Class : 12 Marks
 2nd Class : 09 Marks
 Pass : 06 Marks
 Distinction : 03 Mark
- (iv)
 MA/M.Sc./MCA/equivalent
 : 20 Marks

 80% and above
 : 20 Marks

 75% and less than 80%
 : 18 Marks

 70% and less than 75%
 : 16 Marks

 65% and less than 70%
 : 14 Marks

 Less than 65%
 : 12 Marks
- (v) M.Phil/MS/M.Tech/equivalent: 05 Marks
- 2. The candidates in the categories 2 and 4 are exempted from the Written Test. However, they need to undergo the process of selection by Selection Board through an interview only considering the research aptitude, ability to work in a team, subject interest, availability of supervisors, facilities in the Department and research focus.
- 3. Non-Teaching staff of the University seeking permission to join the Ph.D Programme under following terms and conditions:
- i) A member of non-teaching staff seeking permission to join the research programme must hold a permanent post in the University for a period of at least 08 year's service in the UCE/VSSUT and 03 years in the existing post.
- ii) The employee must be engaged in research as a part of his normal duty so that his work output can qualify for the degree of Ph.D. Study towards Ph.D cannot be done on a part time basis outside the working hours of the University.

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- The application for administrative permission to join a Ph.D programme by a member of Non-Teaching staff must be submitted to the Vice-Chancellor through the Head of the Department/Centre or Section in-charge, as the case may be where the candidate is employed. While submitting the application he/she must give an undertaking to the effect that he/she will abide by all rules and regulations.
- iv) Administrative permission by the Vice-Chancellor for prosecuting Ph.D Programme does not constitute academic approval for admission.
- v) The applications will be examined by the Departmental Academic Committee of the department where the candidate wants to be enrolled. The committee will interview the candidate to ascertain his suitability for the programme.
- vi) Every application for admission under this category shall be examined by Departmental Academic Committee (DRC) taking into account whether the proposal for joining the programme for which permission is sought for arises out of genuine interest and ability, and whether the normal job assignment of the applicant sufficiently overlaps with the proposed research programme. The final approval shall be given by the Vice-Chancellor on behalf the Academic Council considering all aspects and merits of the case.
- vii) The members of the non-teaching staff applying for Ph.D Programme must satisfy the minimum qualification requirement as mentioned in eligibility criteria and should undergo the process of selection through academic career, written test and interview.

STUDENT CATEGORY:

- 1. The various categories of candidates (with or without financial support) mentioned below are eligible for apply for admission to Ph.D Programme provided they satisfy the eligibility criteria and qualification requirements as given in Section 2.1/2.2/2.3
 - (i) Category-1: Full time Students with University Fellowship/Assistantship (Not available this time)
 - (ii) Category-2: Full time Students with External Fellowship (UGC/ CSIR/ DST/ BRNS/ AICTE etc.)
 - (iii) Category-3: Full time Students without Fellowship (Self-financed/Self-supported) (Meritious Full time Students may avail financial assistance from TEQIP-III depending on the availability of funds.
 - (iv) Category-4: VSSUT Faculty Members
 - (v) Category-5: VSSUT Regular Employees (Non-Teaching)
 - (vi) Category-6: Project Scholars (JRF/SRF/RA etc.) or Project Staff Members.
 - (vii) Category-7: QIP Scholars
 - (viii) Category-8: Sponsored Students (Institute/ Research Organization/ Industry)
 - (ix) Category-9: Sponsored/Non-sponsored Students from Burla and Vicinity.

The Ph.D students under categories 1, 2, 3 (with Scholarship), 6 & 7 have to take 10 hours of teaching loads per week and assist in research and consultancy work.

2. Unlike other academic programmes, mere possession of required degrees and a superior academic record do not guarantee admission of a student to the Ph.D Programme. Apart from academic record, the Departmental Academic Committee (DAC) will take into consideration the research aptitude, ability to work in a team, subject interest, availability of supervisors, facilities in the department and the



research focus while selecting candidates to the Ph.D Programme. The composition of Departmental Academic Committee (DAC) is given in Appendix-III.

- 3. Research students (JRF, SRF, RA) of Government R&D Laboratories (DST, DAE, ISRO, DBT, CSIR, DOS, DRDO and similar research organizations) who are not entitled to award their own degrees engaged in full time research can be enrolled under category 2. They will need to spend at least one semester in VSSUT, Burla, while availing the fellowship from the parent organization.
- 4. Candidates employed as SRFs/JRFs/RAs or as full time Research Engineers/Officers in sponsored projects of the VSSUT, Burla may be admitted to the Ph.D Programme under category 6 as project scholars. They need to obtain permission of the Principal Investigator and Dean, SRIC & CE for admission. The Project should have tenure of at least 18 months beyond the date of admission of the candidate to the Ph.D programme. They also have to satisfy the minimum educational requirement and will undergo selection procedure like students of other categories. On termination of project, their status will be full time students without scholarship, unless offered another type of scholarship/fellowship/assistantship.
- 5. Candidates seeking admission to Ph.D Programme under category 7 as QIP scholars will be selected through QIP (Quality Improvement Programme) of Government of India. However, they have to satisfy the minimum educational qualification like the candidates under other categories.
- 6. The University may admit persons who are employed in other organizations (Institute/research organizations/Industries) to Ph.D Programme of any discipline under category 8 as sponsored students. Such candidates should have the following:
 - (i) These candidates must have eligibility criteria as specified above
 - (ii) These candidates must have a total of minimum 2 years full time experience in the sponsoring organization. The candidate must produce the evidence of their work experience alongwith the application form
 - (iii) Intending sponsored candidates must submit their applications in the prescribed form through their employers with suitable endorsement.
 - (iv) Intending sponsored candidates will undergo selection procedure like other students.
 - (v) The sponsored candidates are normally required to stay in the University till completion of assigned work and submission of the thesis. However, in special case, their residential requirement can be reduced to at least six months in order to complete all the course works assigned to them.
 - (vi) The selected sponsored students must submit the relieve order from their parent organization at the time of admission in order to fulfill minimum residential requirement.
- Candidates employed in Institute/Research Organizations/ Government or public or private organizations/industries located at Burla and vicinity (within 15 Kms) may be admitted to Ph.D Programme under category 9 as sponsored students from Burla and vicinity. They need to fulfill all requirements of sponsored students (Category 8) except Para vi. They have to submit a permission letter from their parent organization in place of relieve order at the time of admission to do the course work, appear examinations and other related activities as per the academic requirement of University. The candidate is required to give an undertaking in a non-judiciary stamp paper to complete all the academic requirements, which will be assigned to him/her by DSC.

RESERVATION:

Reservation for Candidates in Ph.D Admission belongs to SC/ST Category/ Physically Challenged/ Disabled Candidates are carried out as per the UGC Guidelines/ Govt. Rules.

SUPERVISOR (For PhD Registration):

- i) All candidates for Ph.D degree are required to carry out their research work under the guidance of one/two supervisors. However, in case of inter- disciplinary research (within the same department or across two departments) a second supervisor may be appointed.
- When there are two supervisors, one of them will be called the Principal Supervisor. Ordinarily the Principal Supervisor will be a faculty member of the registering department. However, in deserving cases the DAC may recommend a faculty member of another department of the VSSUT as Co-Supervisor.
- Principal Supervisors shall be regular faculty member of this University with Ph.D degree and Co-Supervisor shall be chosen from the faculty members of this University with Ph.D degree or other recognize Government Institutions/Universities/ R & D Organizations/Industries with the approval of the Vice-Chancellor.
- iv) Regular faculty members of the VSSUT with 05 years' experience along with adequate research publication as permanent teacher of VSSUT enrolling in Ph.D programme may be self-guided. Such cases should be examined by RPEC and put up to the Academic Council for approval
- v) The faculty member who wants to be a Supervisor/Co-supervisor, he/she must have completed his/her probation period with one-year Post-Doctoral experience.
- The allocation of the Supervisor(s) for a selected student shall be decided by the Departmental Academic Committee in a formal manner depending on the number of students per faculty member, available specialization among the faculty supervisors, and the research interest of the student as indicated during interview by the student. The option form indicating name of the candidate, area of interest and choice of specialization (not name of the supervisor) may be exercised before the selection. The allotment/allocation of Supervisor shall not be left to the individual student/teacher.

SUBMISSION OF COMPLETED APPLICATION FORM

The interested candidates shall fill the online application form available at University website: https://apply.vssut.in/ by 15.06.2021 (23 Hrs). The candidates are required to send a printed signed copy of the application form along with all the required documents and receipt of the online application fee of Rs. 500/- (Rs 200/- in case of SC/ST candidates) by Speed Post only so as to reach the HOD of concerned Department latest by 21.06.2021 (12 Noon). The envelope containing the application should be superscribed as "Application for Ph.D. Programme: Autumn-2021, Department of".

GENERAL INSTRUCTIONS:

- Candidates applying for more than one department are required to apply online separately for each department.
- VSSUT regular employees must enclose administrative permission from the University.

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- 3. Project staff and fellows must enclose administrative permission from Dean, (SRIC/CE); the project must have tenure of at least 18 months beyond the expected date of joining in the Ph.D.
- 4. In case of candidates belonging to categories 8, Part-II of the application form filled up by the sponsoring authority must be uploaded.
- 5. In case of candidates belonging to category 9, Part-III of the application form filled up by the sponsoring authority must be uploaded.
- 6. The candidate is also required to upload an undertaking in a non-judicial stamp paper to complete all the academic requirements of the University related to the Ph.D Programme while working at his/her parent organization at the time of admission.
- Along with the filled in online application form, candidates required to send pass certificates and Mark sheets (from 10th onwards)/ Caste Certificate (if applicable), No objection certificate from employer (if applicable).

Dean (PGS&R)

Date: 14-04-204

Memo No. VSSUT/PGSR/726 / 2021

Copy to:

1. University Notice Board.

2. All Deans/HODs/COF for information & necessary action.

3. Dean, Faculty and Planning with a request to display the information in University website.

4. P.A to VC for kind information of Hon'ble Vice-Chancellor.

Sd/-

Dean (PGS&R)