INFORMATION BROCHURE

FOR

POST GRADUATE PROGRAM

(FULL TIME)

2011-12

SHRI SANT GADGE BABA COLLEGE OF ENGINEERING & TECHNOLOGY

BHUSAWAL-425203 DIST. JALGAON(M.S.)

AN ISO 9001-2008 CERTIFIED INSTITUTE

Approved by AICTE, New Delhi; Affiliated to North Maharashtra University, Jalgaon

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CONTACT NUMBERS FOR QUERY IF ANY REGARDING ADMISSION

SR. NO.	DISCIPLINE/BRANCH	NAME OF STAFF	CONTACT NO.
1	M.E. CIVIL ENGINEERING (Construction Technology & Management)	PROF. P.P.BHANGALE	09422278026
2	M.E. ELECTRONICS & COMMUNICATION ENGINEERING (Communication)	PROF. G.A.KULKARNI	09970052498
3	M.E. COMPUTER SCIENCE & ENGINEERING (Computer Science & Engineering)	PROF. R. K. MAKHIJANI	02582-221719,20
4	M.E. MECHANICAL ENGINEERING (Design Engineering)	PROF A. V. PATIL	09665624444

ABOUT P.G. COURSES

The world "engineering" derived from the Latin word "ingeniare" means "to design" or "to create". Department of Electronics & Communication Engineering, Department of Civil Engineering, Department of Computer Science and Engineering & Department of Mechanical Engineering Offers 2 Years M.E. course with specialization in Communication, Construction Technology & Management, Computer Science and Engineering & Design Engineering respectively with intake of 18 students each. The objective of these courses is "To offer state-of-the-art technical education in the field of Electronics & Communication Engineering, Civil Engineering, Computer Science and Engineering & Mechanical Engineering to the students".

P.G. COURSES:-
[B] Post Graduate Programs (Full Time)

SR NO.	NAME OF THE COURSE	DISCIPLINE	YEAR OF STARTING	DURATION	INTAKE
1	M.E.	M.E. CIVIL ENGINEERING (Construction Technology & Management)	2010	TWO YEAR	18
2	M.E.	M.E. ELECTRONICS & COMMUNICATION ENGINEERING (Communication)	2010	TWO YEAR	18
3	M.E.	M.E. COMPUTER SCIENCE & ENGINEERING (Computer Science & Engineering)	2011	TWO YEAR	18
4	M.E.	M.E. MECHANICAL ENGINEERING (Design Engineering)	2011	TWO YEAR	18

1.0 **Eligibility**

Non-GATE candidates including sponsored candidates having at least 55% marks at Bachelor Degree level as specified below and GATE candidates possessing valid GATE score in the respective subject mentioned below will be eligible for admission to the respective course.

Sr. No.	Name & Discipline of course	Qualifying Examinations Degree	GATE subject
1	M.E. CIVIL ENGINEERING (Construction Technology & Management)	BE/B Tech in Civil Engineering or Equivalent	Civil Engineering or equivalent.
2	M.E. ELECTRONICS & COMMUNICATION ENGINEERING (Communication)	BE/B Tech in Electronics & Communication/Telecommunication Engineering or Electronics Engineering or equivalent. .	Electronics & Communication Engineering or equivalent.
3	M.E. COMPUTER SCIENCE & ENGINEERING (Computer Science & Engineering)	BE/B Tech in Computer Science and Engineering , Information Technology or Equivalent	Computer Science and Engineering , Information Technology or Equivalent
4	M.E. MECHANICAL ENGINEERING (Design Engineering)	BE/B Tech in Mechanical Engineering or Equivalent	Mechanical Engineering or Equivalent

1.1 The GATE candidates having valid GATE score in the respective subject will be given preference and are exempted from appearing Entrance Test.

1.2 When enough GATE qualified candidates in the respective branch are not available, the vacant seats will be offered to the non-GATE candidates, excluding sponsored candidates, as per the merit based on total marks secured out of 100 as indicated below:

- Entrance Test : Maximum 70 marks
- Interview/ viva-voce : Maximum 30 marks

Total Performance 100 marks, minimum qualifying marks 40%.

The Entrance Test, mostly objective type, of one hour followed by Interview will conducted as per the schedule.

1.3 **Sponsored candidates**

The sponsored candidates will have also to appear for the Entrance test and Interview/viva-voce as applicable to Non-GATE candidates as mentioned under Rule No. 1.2.

1.4 **Fee structure:** As per Rules

1.5 **P.G. Admission Schedule**

Sr.No	Activity	Dates Schedule
1	Download application form and other details from web site of the institute	On College Notice Board
2	Last date of submission of application forms and registration fees in the office	
3	Display of provisional list of eligible candidates	
4	Display of final list of eligible candidates	
5	Admissions of valid GATE score candidates (For Full Time M.E .)	
6	Written test of eligible candidates	
7	Personal interview	
8	Display of Merit List of short listed candidates	
9	Admission Full Time candidates	
10	Admission of Wait listed candidates (if seats remain vacant)	
11	Commencement of classes	
12	Cut off date	

1.6 The candidates whom admissions have been offered are required to confirm admissions as per schedule. At the time of confirmation the candidates will have to submit all relevant original certificates with a set of two Xerox copies thereof and if found valid, the candidate will be allowed to pay full fees of the course as per the schedule. If a candidate fails to fulfill both these conditions, the admission offered to him/her will be withdrawn and summarily cancelled and the waiting list will be operated.

2.0. Admission Procedure

2.1 The entrance test and the interview / viva-voce shall be conducted a panel of 3 teachers in the respective branch.

2.2 If the total performance of the candidates are comparable. Then the preference shall be given for admission to the candidates who are GATE qualified and those who are serving in Engineering college, Polytechnic and Industry in that order.

3.0 Entrance Test

3.1 Written entrance test shall be conducted.
Syllabus for this test is given below.

3.2 The date and time of the entrance test and the admission program will be notified by the institutes later.

4.0 **Conduct and Discipline**

4.1 The candidates admitted to various branches will have to adhere strictly to the rules of conduct, discipline, Library, dress code, anti-ragging, etc as prescribed by the Institute from time to time.

4.2 Students while studying in College, if found indulging in anti-national activities contrary to the provisions of acts and laws enforced by Government, any activity contrary to rules of discipline will be liable to be Expelled from the college without any notice by the Principal of the college.

4.3 If any of statement made in application form or any information supplied by the candidate in connection with his / her admission is later on, at any time, found to be false or incorrect, his/her admission will be cancelled, fees Forfeited and he / she may be expelled from the college by the Principal and prosecuted, if deemed necessary. An appeal against the order of expulsion, however, may be referred to the Director of Technical Education whose decision in such cases will be final.

4.4 All candidates for admission to post graduate courses in Engineering / Technology are required to give the following undertaking.

a) I have read all the Rules of Admission for the current year and after understanding those rules, I have filled - in this form of application or admission for the current year.

b) The information given by me in my application is true to the best of my knowledge and belief.

c) I have not been debarred from appearing at any examination held by any Government constituted or statutory examination authority in India.

d) I fully understand that the offer of a course or branch of engineering will be made to me depending on merit interse and availability of a seat at the time of scrutiny of my application, when I report to the admission authority according to the schedule of admission.

e) I understand that no other document, other than those attached to the application form before the last date of admission will be entertained for the purpose of claims/ Concessions etc. in connection with my admission.

f) I hereby agree to confirm to any rules acts and laws enforced by Government and hereby undertake that so long as I am a student of the college, I will do nothing Either inside or outside the college which may results in disciplinary action against Me under the rules acts and laws.

g) I fully understand that the Principal of the college where I would be admitted will have right to expel / rusticate me from the college for any infringement of the Rules of conduct and Discipline prescribed by the College / University (If any) and the undertaking given above.

5.0 GENERAL GUIDELINES

The Candidate who have a valid gate score need not appear for the entrance examination. However they should appear for the interview along with other candidates. As stated in Rule 1.1.

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The Syllabus for the Entrance Test
For
Full Time M.E. Programs
M. E. (Electronics & Communication Engineering)
(Communication Engineering)

COMMUNICATION SYSTEMS:

Fourier analysis of signals, Analog modulation systems, Digital modulation systems, Computer networks, Antenna theory**.**

ADVANCE COMMUNICATION SYSTEMS:

Wireless communication systems, Radar communication, satellite Communication, Mobile communication systems, Sonar Communication System.

ANALOG CIRCUITS:

BJT, JFETs and MOSFET, biasing and bias stability of transistor and FET amplifiers. Amplifiers: single and multi-stage, differential, operational, feedback and power. Analysis of amplifiers: Simple op-amp circuits. Filters, Oscillators, Function generators and wave-shaping circuits, Power supplies.

DIGITAL CIRCUITS:

Boolean algebra, logic gates, digital IC families (DTL, TTL, ECL, MOS, CMOS). Combinational circuits: arithmetic circuits, code converters, multiplexers and decoders. Sequential circuits: latches and flip-flops, counters and shift-registers. Comparators, timers, multivibrators. Sample and hold circuits, ADCs and DACs. Semiconductor memories. Microprocessor (8085): architecture, programming, memory and I/O interfacing.

CONTROL SYSTEMS:

Basic control system components; block diagrammatic description, reduction of block diagrams, properties of systems: transfer function, stability analysis, Signal flow graphs, transient and steadystate response.

NETWORK: Network graphs:

Nodal and mesh analysis. Network theorems; Fourier series, Laplace and Z transforms:

DSP & VLSI:

Basic concepts of Fourier transforms & digital filters, CMOS VLSI fundamentals, modeling styles in VHDL & Fundamentals of Embedded Systems

M. E. Civil Engineering
(Construction Technology & Management)

1) Management and project planning in Construction.
2) Concrete technology
3) New construction materials.
4) Construction Safety.
5) Construction Contracts, Administration and management.
6) Project economics & Financial Management.
7) Advanced Construction Technology.
8) Advanced RCC structure.
9) Advanced Construction equipment.
10) Repairs, Rehabilitation and Retrofitting of structure.

M. E. Computer Science & Engineering
(Computer Science and Engineering)

BASIC MATHEMATICS

Elements of probability, matrix algebra, numerical methods: interpolation, root finding, differentiation and integration. Discrete mathematics: sets, relations, functions, mathematical induction, counting, groups, graphs, partial orders, lattices and Boolean algebra, propositional logic.

THEORY OF COMPUTATION

Regular and context free languages, finite state machines and push down automata, Turing machines and undecidability.

COMPUTER HARDWARE

Logic function, minimization techniques, design of combinational and sequential circuits using gates and flip-flops, design with integrated circuits including ROM and multiplexers, microprocessor architecture: programming, interfacing with memory and I/O devices(modes of data transfer and their implementation, serial and parallel communication interface). Detailed knowledge of 8085 microprocessor will be assumed.

COMPUTER ORGANIZATION

Number representation and airthmetic, functional organization, machine instructions and addressing modes, ALU, hardwired and microprogrammed control, instrucation pipelining, memory organization, input/output.

PROGRAMMING AND DATA STRUCTURE:

structured programming with Pascal/C including recursion; arrays, stacks, strings, queues, lists, trees, sets and graphs; algorithm for tree and graphs traversals, connected component, spanning trees, shortest paths; hashing, sorting and searching algorithm design and analysis techniques, big 'oh' notation, solution of sample recurrence relations.

LANGUAGE PROCESSOR:

Assembler, loader, linker, macroprocessors, text editors, programming languages, scope rules and parameter passing mechanism; compilers lexical analysis, parsing, syntax, directed translation, run time environment, machine code generation; interpreters.

OPERATING SYSTEM

Batch, multi-programming and time-sharing systems; processor, memory, device and file management, virtual memory, process scheduling, interprocess communication, process synchronization and concurrency, deadlocks, protection.

DATABASE SYSTEM

File organization techniques; indexing, B-trees, B-plus trees; relational and network data models; normal forms; query language: SQL

M. E. (Mechanical Engineering)

(Design)

ENGINEERING MECHANICS:

Free body diagrams and equilibrium; trusses and frames; virtual work; kinematics and dynamics of particles and of rigid bodies in plane motion, including impulse and momentum (linear and angular) and energy formulations; impact.

STRENGTH OF MATERIALS:

Stress and strain, stress-strain relationship and elastic constants, Mohr's circle for plane stress and plane strain, thin cylinders; shear force and bending moment diagrams; bending and shear stresses; deflection of beams; torsion of circular shafts; Euler's theory of columns; strain energy methods; thermal stresses.

THEORY OF MACHINES:

Displacement, velocity and acceleration analysis of plane mechanisms; dynamic analysis of slider-crank mechanism; gear trains; flywheels.

VIBRATIONS:

Free and forced vibration of single degree of freedom systems; effect of damping; vibration isolation; resonance, critical speeds of shafts.

DESIGN:

Design for static and dynamic loading; failure theories; fatigue strength and the S-N diagram; *principles* of the design of machine elements such as bolted, riveted and welded joints, shafts, spur gears, rolling and sliding contact bearings, brakes and clutches.

ENGINEERING MATERIALS

Structure and properties of engineering materials, heat treatment, stress-strain diagrams for engineering materials.

COMPUTER INTEGRATED MANUFACTURING:

Basic concepts of CAD/CAM and their integration tools.