# Dr. J.J.Magdum College Of Engineering, Jaysingpur

## RULES FOR ADMISSION
## &
## APPLICATION FORM

For
**ADMISSIONS**
TO

# MASTER OF ENGINEERING (M.E.)

**YEAR 2010-2011**

# Index

# Dr. J.J.Magdum College of Engineering, Jaysingpur

## RULES FOR ADMISSION TO M. E. PROGRAM

**1.** The following two years M.E. Programs are conducted at the college.

i) M.E. Civil (Construction Management)

ii) M.E. Electronics & Communication ( Electronics & Telecommunication)

**2. Eligibility:**

A. A candidate who has passed the degree of **B. E. / B. Tech.** of Shivaji University or degree of another University as equivalent thereto, with minimum of 55% marks in the final year is eligible for admission to the **appropriate M. E. program**, by papers and dissertation.

B. The Diploma holders after passing their section A and B examinations of Institution of Engineers (India) Kolkata are considered eligible for admission to M. E. program in the respective branch only when they qualify through the GATE examination for the respective branch.

C. A candidate who has passed B. E. / B. Tech. in Civil / Water management / Environmental Engineering from Shivaji University or equivalent examination from any other University is eligible for admission to the M. E. Civil (Construction &Management).

D. A candidate who has passed the Grade-Institution of Electronics and Telecommunication Engineers Examination is eligible for the admission to M. E.. Electronics & Communication, if he/she has passed GATE (Graduate Aptitude Test in Engineering) examination for Electronics Engineering successfully

E. For admission under the sponsored category the candidate should have, in addition to the qualification mentioned in A to D, minimum of two years full time work experience as a permanent employee in a registered firm / company / industry / educational or research institute or in any Govt / Non-Govt. Organization in the relevant field. The candidate under sponsored category will have to submit the certificate from his/her employer in the prescribed format given in this form. GATE qualified sponsored candidate will be given preference.

3. **Admission Rules:**

Admission will be offered according to merit list prepared on the basis of valid GATE score in the respective branch only. GATE score in one branch will not be valid for admission to other branch

4. If the seats available do not get filled in by the GATE qualified applicants, the remaining seats will be considered for admission on a non-stipendiary basis. **Non-GATE applicants will have to appear for an entrance test conducted by the College.** Merit list of non GATE applicants will be prepared on following basis.

| Sr. No. | Particulars | Weightage |
|---|---|---|
| 1 | Entrance examination | 60% |
| 2 | Marks of Qualifying Examination | 20% |
| 3 | Personal Technical Interview | 20% |

5 . **Five seats in each course are reserved for the sponsored candidates.** All sponsored (Non-GATE) candidates will have to appear for the entrance test conducted by the College. GATE qualified sponsored candidate will be given preference. Preference will be given to the candidate who is serving in Engineering College, Polytechnic or Industry, in that order.

**Distribution of Seats**

| M.E. Program | Normal Seats | Seats for SC | Seats for ST | Sponsored seats | Total Seats |
|---|---|---|---|---|---|
| Civil (Construction Management) | 10 | 2 | 1 | 5 | 18 |
| Electronics & Communication (Electronics & Trelecommunication | 10 | 2 | 1 | 5 | 18 |

6. All admission offered and accepted will be **provisional** and will be subjected to the grant of the eligibility by Shivaji University, Kolhapur, and or College. For this purpose, every applicant has to fill in the eligibility form and submit it along with the original transference/leaving certificate from his/her previous institutes, the mark sheet and passing certificates of his/ her previous examination and the migration certificates from the previous university at the time of admission.
7. The candidate will also have to register as a post graduate student with the Shivaji University by applying for the same along with a necessary fee.
8. Applicants belonging to reserved categories will have to produce their **caste certificate and caste validity certificate** from competent authorities, for being considered for the reserved seats. If the caste certificate/caste validity certificate is not produced, he /she will be considered as an open candidate.
9. Every stipendiary candidate will have to carry out some assignments of undergraduate teaching or laboratory development and administration as assigned by the College.
10. The student shall be required to give an undertaking to the effect that he/ she would not leave the course midway or appear in any competitive examination in order to be eligible to receive scholarship.

**11**. Fees: (Per Year) **Likely to be revised**

| Category | Total Fee Rs |
|---|---|
| Normal intake-GATE candidates | **50000** |
| Non sponsored candidates | **50000** |
| Sponsored candidate | **60000** |

**Other Fees:**

| M. E. Program | Civil | Electronics |
|---|---|---|
| Exam Fee Rs. | 2450 | 2150 |
| Security and Wi-Fi Rs. | 1000 | 1000 |
| Caution deposit Rs. | 500 | 500 |
| Registration, Eligibility of Shivaji University (aprx.) Rs. | 1500 | 1500 |
| **Total Rs.** | **5450** | **5150** |

Entire fees per year are to be paid in only one installment on the day of admission

12. **Conduct and Discipline:**

a) Candidate admitted to these courses if found indulging in any activities contrary to the rules formed in this connection by the college, university/Govt. is liable to be expelled from the college without any notice.

b) If any statement made in application from or any information supplied by the candidate in connection with the admission, is later on at any time, found to be false or incorrect, his/her admission will be cancelled and he may be expelled from the college.

c) **Action against ragging: Maharashtra Prohibition of Ragging Act 1999 which is in effect from 15th May 1999 has the following provisions for Action against Ragging.**

i) Ragging within or outside of any educational institution is prohibited.

ii) Whosoever directly or indirectly commits, participates in, abets, or propagates ragging within or outside any educational institution shall, on conviction, be punished with imprisonment for a term up to 2 years and / or penalty which may extend to ten thousand rupees.

iii) Any student convicted of an offence of ragging shall be dismissed from the educational institution for a period of five years from the date of order of such dismissal.

iv) Whenever any student , his / her parent or guardian or a teacher of the educational institution, complains in writing to the head of the educational institution, the head of the educational institution shall, without prejudice to the foregoing provisions, within seven days of the receipt of the complaint, enquire into the matter mentioned in the complaint and if, prima facie, it is found true, suspend the student who is accused of the offence, and shall, immediately forward the complaint to the police station having jurisdiction over the area in which the educational institution is situated, for further action. Where, on enquiry by the head of the educational institution, it is found that there is no substance, prima facie, in the complaint received, he/she shall intimate the fact, in writing, to the complainant. The decision of the head of the educational institution shall be final.

13. The candidate will not be permitted to appear for examination if after admission he/she does not put in satisfactory attendance at all theory and practical classes and does not complete the prescribed term work / project work to the satisfaction of the subject teacher.

14) Refund of fees: As per rules prescribed by the college authorities from time to time.

15) Hostel: Limited hostel accommodation and mess facilities are available.

16) The application form can be downloaded from the college website www.jjmcoe.org. The form must be submitted (hard copy) with a D.D. of Rs.700/- for open category and D.D. of Rs 500 for reserve category candidate (SC/ST only). D.D. must be drawn in favors of **"Principal, Dr. J.J.Magdum College of Engineering, Jaysingpur"** on any nationalized bank payable at Jaysingpur.

17) The last date for receiving completed applications form together with necessary enclosures is 12th July 2010.

18 The merit list of the applicant with valid GATE score will be put up on the notice boards of the respective departments on 13th July 2010 by 10.00 a.m. Candidate should report to the concerned department sharp at 10.00 a.m. Admission will be offered as per merit list on the same day according to the availability of seats.

Candidate in the merit list, who reports late on this date, will only be considered for admission, subject to the availability of vacancy at that time.

19 The entrance test for non-GATE applicant will be held on 15h July 2010 in the respective department. The interviews of non-GATE candidate will be conducted on 16th July 2010 in respective department at 10.00 a.m. and merit list will be announced. Admission will be offered as per merit list according to the availability of seats. The course will commence from 19th July 2010 onwards.

20. GATE card must be produced in original at the time of admission. Those candidates whose U.G. results are yet to be declared will be held eligible subject to the condition that they will produce the results within 15 days from the date of admission. If they fail to produce the result, the seat will be offered to the next candidate in the merit list.

**The candidates will have to bring all the certificates including B.E/ B.Tech. Mark list, leaving certificates, migration certificates if applicable caste and caste validity certificate and passing certificates in original at the time of admission.**

21. Any change in the rules / procedure as may be made by Govt. of India/ Govt. of Maharashtra / Shivaji University / College authorities regarding the admission to the College will be applicable as and when it is announced.

| **IMPORTANT DATES: Admission schedule** | |
|---|---|
| Last date of submission of application | 12th July 2010 |
| Admission of GATE qualified candidates | 13th July 2010 |
| Written test of non –GATE candidates | 15th July 2010 |
| Interview of non –GATE candidates and display of merit list | 16th July 2010 |
| Admission of non-GATE candidates | 17th July 2010 |
| Commencement of the PG classes | 19th July 2010 |

- P.G. Academic rules and regulations can be downloaded from our website **www.jjmcoe.org**
- Cancellation of admission will be processed as per DTE norms in force time to time.

**Contact phone numbers of respective departments for the detailed information**

| S.N. | Name of Department | Phone Number | Head of Department |
|---|---|---|---|
| 1 | Civil Engineering | 9421114007 | Prof. D.B. Desai |
| 5 | Electronics & Communication Engineering | 9422589425 | Prof. Mrs. V.V.Patil |

Annexure-A

**SYLLABUS FOR ENTRANCE EXAMINATION**

**(As prescribed by Shivaji University, Kolhapur)**

## 1. Syllabus For M.E. (Civil) Construction Management Entrance Test Examination

### Section I

1. Natures and Importance of Management. –

   Contribution by Taylor, Fayol, Gilbreth, Mayo and Me Creger.

2. General Principles of Management, functions and qualities of Manager.

3. Inventory control EOQ, ABC_Safety stocks.

4. Introduction to CPM-PERT, Forward and Backward Pass, Calculation

   of EST, EFT, LST, LFT & Floats.

5. Engineering Economics-Time Value of Money-Cash Flow diagrams-Present and future worth-Annual Cost-Equivalence, Payback-Rate of Return and Yield.

### Section II.

6. Excavation and Transportation of earth & rock, Tractor, Scapers, Rippers, Shovels, Trucks etc. Dragline, Clamshells etc. Safety considerations and efficiencies of such machineries and economics and selection of Equipment.

7. Rock Excavation-Drills, Jackhamers, -Compressors-Blasting. Explosives fuses misfixs safety precautions Dewatering, Surface pumping, Electro-osmosis method.

8. Concrete-Batching and Mixing-Central Plants, Transit misers, curing, Finishing and Q. C. tests. Pumping and groution conerete, shotcrete methods, Underwater concreting, concreting for prestressed concrete, prestressing yards, tools and equipments.

## 2. Syllabus For M.E. Electronics & Communication ( Electronics & Telecommunication) Entrance Test Examination

### Engineering Mathematics

**Linear Algebra**: Matrix Algebra, Systems of linear equations, Eigen values and Eigen vectors.

**Calculus**: Mean value theorems, Theorems of integral calculus, Evaluation of definite and improper integrals, Partial Derivatives, Maxima and minima, Multiple integrals, Fourier series. Vector identities, Directional derivatives, Line, Surface and Volume integrals, Stokes, Gauss and Green's theorems.

**Differential equations**: First order equation (linear and nonlinear), Higher order linear differential equations with constant coefficients, Method of variation of parameters, Cauchy's and Euler's equations, Initial and boundary value problems, Partial Differential Equations and variable separable method.

**Complex variables**: Analytic functions, Cauchy's integral theorem and integral formula, Taylor's and Laurent' series, Residue theorem, solution integrals.

**Probability and Statistics**: Sampling theorems, Conditional probability, Mean, median, mode and standard deviation, Random variables, Discrete and continuous distributions, Poisson, Normal and Binomial distribution, Correlation and regression analysis.
**Numerical Methods**: Solutions of non-linear algebraic equations, single and multi-step methods for differential equations.

**Transform Theory**: Fourier transform, Laplace transform, Z-transform.

### Electronics and Communication Engineering

**Networks:** Network graphs: matrices associated with graphs; incidence, fundamental cut set and fundamental circuit matrices. Solution methods: nodal and mesh analysis. Network theorems: superposition, Thevenin and Norton's maximum power transfer, Wye-Delta transformation. Steady state sinusoidal analysis using phasors. Linear constant coefficient differential equations; time domain analysis of simple RLC circuits, Solution of network equations using Laplace transform: frequency domain analysis of RLC circuits. 2-port network parameters: driving point and transfer functions. State equations for networks.

**Electronic Devices:** Energy bands in silicon, intrinsic and extrinsic silicon. Carrier transport in silicon: diffusion current, drift current, mobility, and resistivity. Generation and recombination of carriers. p-n junction diode, Zener diode, tunnel diode, BJT, JFET, MOS capacitor, MOSFET, LED, p-I-n and avalanche photo diode, Basics of LASERs. Device technology: integrated circuits fabrication process, oxidation, diffusion, ion implantation, photolithography, n-tub, p-tub and twin-tub CMOS process.

**Analog Circuits:** Small Signal Equivalent circuits of diodes, BJTs, MOSFETs and analog CMOS. Simple diode circuits, clipping, clamping, rectifier. Biasing and bias stability of transistor and FET amplifiers. Amplifiers: single- and multi-stage, differential and operational, feedback, and power. Frequency response of amplifiers. Simple op-amp circuits. Filters. Sinusoidal oscillators; criterion for oscillation; single-transistor and op-amp configurations. Function generators and wave-shaping circuits, 555 Timers. Power supplies.

**Digital circuits:** Boolean algebra, minimization of Boolean functions; logic gates; digital IC families (DTL, TTL, ECL, MOS, CMOS). Combinatorial circuits: arithmetic circuits, code converters, multiplexers, decoders, PROMs and PLAs. Sequential circuits: latches and flip-flops, counters and shift-registers. Sample and hold circuits, ADCs, DACs. Semiconductor memories. Microprocessor(8085): architecture, programming, memory and I/O interfacing.

**Signals and Systems:** Definitions and properties of Laplace transform, continuous-time and discrete-time Fourier series, continuous-time and discrete-time Fourier Transform, DFT and FFT, z-transform. Sampling theorem. Linear Time-Invariant (LTI) Systems: definitions and properties; causality, stability, impulse response, convolution, poles and zeros, parallel and cascade structure, frequency response, group delay, phase delay. Signal transmission through LTI systems.

**Control Systems:** Basic control system components; block diagrammatic description, reduction of block diagrams. Open loop and closed loop (feedback) systems and stability analysis of these systems. Signal flow graphs and their use in determining transfer functions of systems; transient and steady state analysis of LTI control systems and frequency response. Tools and techniques for LTI control system analysis: root loci, Routh-Hurwitz criterion, Bode and Nyquist plots. Control system compensators: elements of lead and lag compensation, elements of Proportional-Integral-Derivative (PID) control. State variable representation and solution of state equation of LTI control systems.

**Communications:** Random signals and noise: probability, random variables, probability density function, autocorrelation, power spectral density. Analog communication systems: amplitude and angle modulation and demodulation systems, spectral analysis of these operations, superheterodyne receivers; elements of hardware, realizations of analog communication systems; signal-to-noise ratio (SNR) calculations for amplitude modulation (AM) and frequency modulation (FM) for low noise conditions. Fundamentals of information theory and channel capacity theorem. Digital communication systems: pulse code modulation (PCM), differential pulse code modulation (DPCM), digital modulation schemes: amplitude, phase and frequency shift keying schemes (ASK, PSK, FSK), matched filter receivers, bandwidth consideration and probability of error calculations for these schemes. Basics of TDMA, FDMA and CDMA and GSM.

**Electromagnetics:** Elements of vector calculus: divergence and curl; Gauss' and Stokes' theorems, Maxwell's equations: differential and integral forms. Wave equation, Poynting vector. Plane waves: propagation through various media; reflection and refraction; phase and group velocity; skin depth. Transmission lines: characteristic impedance; impedance transformation; Smith chart; impedance matching; S parameters, pulse excitation. Waveguides: modes in rectangular waveguides; boundary conditions; cut-off frequencies; dispersion relations. Basics of propagation in dielectric waveguide and optical fibers. Basics of Antennas: Dipole antennas; radiation pattern; antenna gain.

| | |
|---|---|
| Last date of receiving application for admission | **12th July 2010** |
| Application form fee Rs.700 for open category and Rs.500 for SC/ST category candidate | |

# Dr. J.J.Magdum College of Engineering, Jaysingpur, 416 101

**APPLICATION FOR ADMISSION TO M. E. PROGRAM, 2010-2011.**

**INSRUCTIONS TO CANDIDATES:**

- Download the form from the website
- Separate application forms should be submitted if a candidate is applying for more than one program.
- Candidates awaiting the results of the qualifying exams may also apply.
- Sponsorship certificate must be filled by sponsoring authority for the sponsored candidates on the letter head of sponsor (Download format from annexure).
- Attach the photocopies of relevant certificates along with the duly filled form.
- Attach the Demand Draft of Rs. 700/- (open), Rs. 500/- (Reserved Categories) in the favor of "**Principal, Dr. J.J.Magdum College of Engineering, Jaysingpur**" with the form.
- The application should reach **"Principal, Dr. J.J.Magdum College of Engineering, Jaysingpur 416101",** before the last date notified in admission schedule.

**FOR OFFICE USE**

Application No. Date of Receipt:

**Admission Offered:-**

| Date | Programme | Roll no. | Sign. Of authorized Person |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

**Cancelation:**

| Date: | Reason: | Signature of authorized person |
|---|---|---|
| | | |

**APPLICATION FOR M. E. PROGRAMME IN**

**Tick Appropriate Box (One only)**

1 M. E. Civil (Construction Management.) ☐

2 M. E. Electronics & Communication
(Electronics & Telecommunication)

| **Admission Type** | | | | |
|---|---|---|---|---|
| | GATE | Non-GATE | Sponsored | Internal |

| **Catagory** | | | | |
|---|---|---|---|---|
| | Open | SC | ST | Religion |

**1. Personal Details**

Name in Full (in Block Letters) (Beginning with Surname)

Date of Birth

Sex (M/F) Blood Group

**2. Permanent Address** **Address for correspondence**

| | |
|---|---|
| | |
| Pin: | Tel No.: |
| Mobile: | E-mail: |

### 3. Details of Academic Qualification:

| Name of Exam | University | Year of passing | No. of Attempts | Class obtained | Total Marks obtained out of (Taken together part I/II | % Marks |
|---|---|---|---|---|---|---|
| F.E. | | | | | | |
| S.E. | | | | | | |
| T.E. | | | | | | |
| B.E. | | | | | | |

| GATE Qualified | GATE Exam NO. | Score | Year of Passing | Discipline |
|---|---|---|---|---|
| if YES | | | | |

| AMIE qualified (if YES give particulars) | |
|---|---|

| Details of experience and achievement **(for sponsored candidates only)** | |
|---|---|
| Place of working: | |
| Designation: | |
| Period of working: | |
| Paper publication: | |
| Technical Exhibits / models: | |
| Prizes & any such achievement: | |

### 4. Father's / Guardian's Details

| Father's full name and address | |
|---|---|
| Mother name | |
| Annual Income: | |
| Nationality: | |

5) Whether Hostel accommodation is required: _____

6) **Declaration by the candidate:**

I hereby declare that the information given above is correct to the best of my knowledge. I undertake to observe and abide by the rules and regulation of the college.

I also declare that I have not been debarred from appearing for any examination held by Government or any statutory Examining Authority in India.

I also enclose herewith self addressed envelope along with D.D. No_____ dated_____ drawn on _____ for Rs.700/500 in favor of the Principal, Dr. J.J.Magdum College of Engineering, Jaysingpur i.

**Date :** **(Signature of candidate)**

**NOTE :**

1. Only **attested copies** of relevant original certificates (Final Year Mark list and LC/TC) are to be enclosed with the application. Originals are to be produced at the time of interview; no admission will be effected unless original certificates are produced.
2. No correspondence of any sort will be entertained regarding the position of admission.
3. Incomplete applications will not be considered.
4. If a candidate reports late for admission, he/she will be considered only if there is a vacancy at the time of his/her reporting.

**Classes will commemce from19th July 2010**

**SPONSORSHIP CERTIFICATE FROM EMPLOYING ORGANIZATION**

(On the letter head of the organization)

This application of _____

_____

( Name and Address)

Working as _____in the pay scale of (Designation) Rs._____ since _____ in our organization is herewith recommended and sponsored by us. He/She will be granted study leave with full pay and allowance for admission to the M.E program (Regular) for two years at Dr. J.J.magdum College of Engineering Jaysingpur.

If he/she is selected, he/she will be permitted to join the course from the date of commencement of the program i.e.

Date:
Postal address of
Organization

Sponsoring Authority
with signature & seal