

राष्ट्रीय प्रौद्योगिकी संस्थान, राउरकेला NATIONAL INSTITUTE OF TECHNOLOGY, ROURKELA

NITR/AC/EPTP/2021/L/681

23rd June, 2021

Notice for Admission to Executive Ph. D., Executive MBA and Part-Time M. Tech. Programmes Starting in Autumn (July) 2021-22

Online applications are invited from interested and eligible Indian citizens for admission to the Executive Ph. D., Executive MBA and Part-Time M.Tech. Programmes of the Institute to be offered under **Self Financing Scheme** Starting in Autumn (July) semester of the AY 2021-22.

SI. No.	Name of the Department	Code	Specialization for Executive MBA/Part-Time M. Tech.	Indicative Broad Areas of Research for Executive Ph.D		
1	Inter Disciplinary		Safety Engineering			
2	Biotechnology and Medical Engineering	BM		Medical Electronics & Instrumentation, Biomaterials & Tissue Engineering, Cell & Molecular Biology, Bioprocess Engineering, Agriculture & Environmental Engineering, Biomechanics & Bio transport.		
3	Civil Engineering	CE	Geotechnical, Structural	Geotechnical Engineering, Structural Engineering, Transportation Engineering, Water Resources Engineering, Environmental Engineering		
4	Chemical Engineering	СН	Coal Chemicals and Cryogenics	All the conventional areas under Chemical Engineering		
5	Ceramic Engineering	CR		Advanced Ceramics, Industrial Ceramics		
6	Computer Science & Engineering	CS	Computer Science	All specializations of Computer Science & Engineering		
7	Chemistry	CY		Inorganic, Organic, Physical, Materials, Bio- Inorganic, Organometallic, Biophysical Chemistry, Nano Science, Environmental, Computational, Theoretical Chemistry, Solid State, Biochemistry		
8	Electronics & Communication Engineering	EC	Electronics & Instrumentation	VLSI Design & Embedded Systems, Microwave & Radar Engineering, Signal & Image Processing, Communication and Networks, Electronics and Instrumentation		
9	Electrical Engineering	EE	Industrial Power Control & Drives	Power Electronics Converters & Control, Electrical Machines, High Performance Industrial Drives, Electric Vehicles and Battery management Systems, Renewable Energy, Power System, Smart Grid, High Voltage and Electrical Insulation, Power Quality Improvement, Control System, Energy Policies and Management, Energy		

				Storage and Conversion, RF & Microwave, Wireless Communication & Networks, Signal & Image Processing, Computer
				Vision, Nanotechnology, Microelectronics, VLSI & Embedded Systems, Machine learning & AI, Sensors & IoT.
10	Earth and Atmospheric Sciences	ER		Geology, Applied Geology, Geophysics, Atmospheric & Ocean Sciences, Climatology
11	Food Process Engineering	FP		Food Quality & Safety, Food Process Design, Horticultural Process Technology, Food Grains and Oilseeds Process Engineering, Food Packaging and Storage Engineering, Dairy and Livestock Process Engineering
12	Humanities & Social Sciences	HS		Economics, English, Sociology/Anthropology, Psychology, Sanskrit and relevant subjects related to Humanities and Social Sciences
13	Industrial Design	ID		Robotics, HCI, DFMA, Product Design, CAD, Ergonomics Design, Acoustics, Vibration, Interaction Design, AR/VR etc
14	Life Science	LS		All areas of Biological Science/Life Science
15	Mathematics	MA		Numerical Analysis, Number Theory, Differential Equation, Fractional Calculus, Probability & Statistics, Mathematical Physics, Integral Equations, Stochastic Process, Functional Analysis, Fractal Theory, Soft Computing, Convex and Variational Analysis, Algebraic Combinatorics, Algebraic Graph Theory, Linear Algebra, Fluid Dynamics, Representation Theory, Control Theory
16	Mechanical Engineering	ME	Thermal Engineering	Thermal, Cryogenic and Vacuum Tech., Industrial Engg. & Management, Production Engg., Machine Design and Material, Manufacturing Science
17	Metallurgical & Materials Engineering	MM	Steel Technology	Physical Metallurgy, Mechanical Metallurgy, Nano-materials
18	Mining Engineering	MN		All specialization of Mining Engineering
19	Planning and Architecture	PA		Climate responsive Building Design, Construction Management, Urban Planning, Urban Design, Housing, Neighborhood Planning/Community Planning, Age friendly Neighborhoods/Cities, Environmental Psychology, Globalization, City-network, Network Analysis, Urban Amenities, Leisure Amenity, Age friendly Cities, Vulnerability Assessment.
20	Physics and Astronomy	РН		Nuclear Astro-physics, Solar & Space Physics, Nonlinear Dynamic & Complex System, Stellar Astrophysics, Soft Condensed Matter, Astrophysics & Cosmology, Functional Material, Astronomy & Astrophysics, Soft Matter & Polymer

				Physics, Low Temperature Physics, Functional Material, Theoretical Physics		
21	School of Management	SM	Finance Management, Operations Management, Human Resource Management and Marketing Management	Human Resource Management, Marketing Management, General Management, Entrepreneurship		

B. Qualification required for Executive Ph. D Program

Minimum qualification required for admission to Executive Ph. D programs in Engineering, Science, Planning & Architecture, Management, and Humanities & Social Sciences is one of the following:

- a) M.E./M.Tech./M.Pharm in relevant discipline with at least 6.5 CGPA or 60 percent marks or 1st class in in both B.Tech.(B.Pharm/M.Sc./MCA or equivalent) and M.Tech levels from a recognized Technological Institute or University.
- b) B.E./B.Tech./B.Pharm/MCA/B.Arch. or equivalent in relevant discipline with at least 7.0 CGPA or 65 percent marks.
- c) M.Sc. in Basic Sciences with CGPA 7.0 or 65 percent marks in relevant disciplines. For applicants with valid GATE/NET/GPAT score, requirement may be relaxed by maximum 0.5 CGPA or 5% marks.
- d) M.B.B.S./B.V.Sc. with 6.5 CGPA or 60 percent marks or 1st class.

Besides, applicants having the following qualification are also eligible for Executive Ph. D Programme in Management and Humanities & Social Sciences:

e) M.A. / MBA / M.Com. / M. Sc. in Humanities and Social Sciences or Management with at least 6.5 CGPA or 60 percent marks or 1st class and B.A. / BBA / B.Com. / B. Sc. with at least 6.5 CGPA or 60 percent marks or 1st class.

Relaxation –

- a) Relaxation of 0.5 in CGPA [5 percent in marks] may be considered in the qualifying degree for the Group-A officers of Central/State Govt./Autonomous Bodies, faculty and Group-A officers of Central/State Universities/CFTIs, positions in private sectors having annual CTC equal to annual gross pay at the minimum pay scale in Level – 10 of 7 CPC Pay Matrix, who have at least 5 years of experience as on **30th June 2021**.
- b) Less than 6.5 CGPA [6 percent marks] in 10th and/or 12th will be accepted without qualifying in NET/GATE/any other examination.
- c) Less than 6.5 CGPA [6 percent marks] in B.A. / BBA / B.Com. / B. Sc. / B.E. / B. Tech. / B. Pharm. / M. Sc. / MCA will be accepted if the same is not the minimum qualifying degree

[i.e. in case of (a), (c) and (e) above] for applicants who have qualified in NET/GATE/GPAT/any other examination in any year (validity not mandatory).

In addition to the above eligibility criteria (based on minimum qualification), following additional criteria will also be applicable:-

- a) For admission to Engineering and Science disciplines (except Life Science), an applicant should have passed Mathematics in +2 Science.
- b) Science students admitted to Ph. D program in Engineering need Mathematics in +3 level. Students without Mathematics in +3 level may be admitted under the condition that they will have to register for 16 credits of 1000 and 2000 level Mathematics and 1000 level Computer Science courses (Theory and Practical) in addition to their normal course requirement, and secure at least C grade in each course.
- c) A student should have passed Life Science or Biological Science either in +2 or +3 level for admission to Ph. D in Life Science department.
- d) Students without adequate background in the primary discipline will be required to have 10% extra marks (1.0 CGPA) to qualify over students with specialization in a primary discipline, unless explicitly exempted by the Senate. List of primary disciplines and specializations for various departments is given in Clause "D" below.

However, a higher selection criteria (may be different for different departments) may be set by the Departments during scrutiny of applications depending on the number and quality of applications. Therefore, mere fulfillment of the minimum eligibility criteria does not guarantee an applicant to be called for test/interview and/or grant of admission.

C. Qualifying Degrees and Primary Disciplines for Executive Ph.D. Programme

Qualifying Degrees and relevant primary disciplines for admission to Executive Ph.D. Programme of various departments will be as mentioned against respective departments in the following table.

Department	Academic Eligibility / Primary Disciplines for Executive Ph.D
Biotechnology and Medical Engineering (BM)	ME / M. Tech. / BE / B. Tech. OR Master's / Bachelor's degree in Medicine / Dental / Veterinary / Pharmacy OR Master's degree in Basic Science
Civil Engineering (CE)	M. Tech. / B. Tech. in Civil / Mining / Mechanical / Agricultural / Chemical Engineering
Chemical Engineering (CH)	B. Tech. / M. Tech. in Chemical / Petroleum and Petrochemical / Polymer / Environmental / Metallurgical & Materials / Ceramic / Mechanical / Biochemical / Mining Engineering/ Nanotechnology / Biotechnology
Ceramic Engineering (CR)	 B. Tech. / M. Tech. in Ceramic / Metallurgical & Materials / Chemical / Mechanical Engg. / Biomedical Engg / Nanotechnology / Biotechnology OR M. Sc. in Physics / Chemistry / Materials Science / Nano Science
Computer Science & Engineering (CS)	B. Tech. / M. Tech. in Computer Science & Engineering / Information Technology OR MCA OR M. Sc. in Computer Science / Information Technology
Chemistry (CY)	M. Sc. in Chemistry / Physics / Biochemistry / Biotechnology / Nanoscience & Nanotechnology / Bioinformatics / Industrial Chemistry / Applied
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	Chemistry / Environmental Chemistry / Food Science & Technology / Nutrition OR M. Pharm. OR B. Tech. / M. Tech. in Chemical Engineering / Ceramic Engineering / Metallurgical and Materials Engineering / Biotechnology
Electronics & Communication Engineering (EC)	B. Tech. / M. Tech. in Electronics Engineering / Electrical Engineering / Electronics & Communication Engineering / Electronics & Telecommunication Engineering / Electronics & Instrumentation Engineering / Applied Electronics & Instrumentation Engineering / Electrical and Electronics Engineering
Electrical Engineering (EE)	B. Tech. / M. Tech. in Electrical Engineering / Electronics Engineering / Electrical & Electronics Engineering / Electronics & Communication Engineering / Instrumentation Engineering / Instrumentation & Control Engineering
Earth & Atmospheric Science (ER)	M. Sc. / M. Tech. in Geology / Applied Geology / Geophysics / Environmental Science / Remote Sensing / Chemistry / Physics / Atomspheric Science / Meteorology / Oceanography / Mathematics OR B. Tech. / M. Tech. in Civil Engineering / Mining Engineering / Electronics Engineering / Computer Science & Engineering
Food Process Engineering (FP)	B. Tech. with M. Tech. in Food Processing Engineering / Food Technology / Agricultural Process Engineering / Post Harvest Engineering / Agricultural Engineering
Humanities and Social Sciences (HS)	M. Sc. / MA in Economics / English / Sociology / Anthropology / Psychology / Sanskrit OR B. Tech. / M. Tech. in any branch of Engineering OR MBA
Industrial Design (ID)	B. Des. / BE / B. Tech. with M. Des. / ME / M.Tech. in any discipline.
Life Sciences (LS)	 M. Sc. in Life Sciences / Botany / Zoology / Microbiology / Biotechnology / Biochemistry / Bioinformatics / MBBS / BVSc/ Bio-Physics / Food Science & Technology OR B. Tech. / M. Tech. in Biotechnology or any branch of biological sciences OR B. Pharm. / M. Pharm. OR MS in any branch of biological sciences
Mathematics (MA)	M. Sc. in Mathematics / Statistics / Computer Science / Information Technology OR MCA OR First class B. Sc. with Mathematics / Statistics as Honors' OR B. Tech. / M. Tech. in any branch of engineering
Mechanical Engineering (ME)	B. Tech. / M. Tech. in Mechanical / Machine Design / Thermal / Cryogenics / Mechatronics / Robotics / Mechanical Vibrations / Automobile / Production / Manufacturing / Industrial Management / Aerospace / Aeronautical / Composites / Tribology / Fluid Flow and Heat Transfer
Metallurgical & Materials Engineering (MM)	B. Tech. / M. Tech. in Metallurgy Engineering / Metallurgical & Materials Engineering / Ceramic Engineering / Chemical Engineering / Mechanical Engineering / Production Engineering / Manufacturing Engineering OR M. Sc. in Physics / Chemistry / Materials Science
Mining Engineering (MN)	B. Tech. / M. Tech. in Mining / Civil / Environmental / Chemical / Electronics / Electrical / Instrumentation / Computer Science / IT / Mechanical / Metallurgical & Materials Engineering OR M. Sc. in Geology / Geo-Physics / Environmental Science / Remote Sensing / Mathematics / Statistics / Chemistry / Physics
Planning & Architecture (PA)	B. Arch. with M. Arch. / MCP / MURP / MUP / MTRP / M. Tech.
Physics and Astronomy (PH)	M. Sc. in any branch of Science with Mathematics and Physics at B. Sc. level OR B. Tech. / M. Tech. in any branch of Engineering.
School of Management (SM)	B. Tech. / M. Tech. in any discipline OR MBA / M. Sc. / MA / M. Com.

Any Graduate with at least 6.5 CGPA or 60 percent marks in aggregate of all subjects **AND** 02 years of post-qualifying degree work experience as on **30 June**, **2021**.

E. Eligibility for Part-Time M. Tech. Programme

Qualifying Degree and relevant Branch/Discipline as given below with at least 6.5 CGPA or 60 percent marks in aggregate.

Department	Specialization	Qualifying Degree and Branch/Discipline		
Inter Disciplinary	Safety Engineering	BE / B. Tech. in any branch of Engineering		
	Geo-Technical	BE / B. Tech. in Civil Engineering / Civil Technology / Civil Engineering and Planning		
Civil Engineering	Structural	BE / B. Tech. in Civil Engineering / Civil Technology / Construction Engineering / Construction Technology / Structural Engineering / Applied Mechanics / Civil Engineering and Planning		
Chemical Engineering	Coal Chemicals & Cryogenics	BE / B. Tech. in Chemical Engineering / Chemical Technology		
Computer Science & Engineering	Computer Science	BE / B. Tech. in Computer Science & Engineering / Information Technology OR MCA OR M. Sc. in Computer Science / Information Technology		
Electronics & Communication Engineering (EC)	Electronics & Instrumentation	BE / B. Tech. in any branch relating to Electronics/Instrumentation/Electrical Engineering		
Electrical Engineering (EE)	Industrial Power Control & Drives	BE / B. Tech. in any branch relating to Electrical Engineering		
Mechanical Engineering (ME) Thermal Engineering		BE / B. Tech. in Aeronautical Engineering / Aerospace Engineering / Chemical Engineering / Mechanical Engineering		
Metallurgical & Materials Engineering (MM)	Steel Technology	BE / B. Tech. in any branch of Engineering		

F. Equivalent Degree / Specialization / Discipline

In the case of applicants not having exact Degree / Specialization / Discipline as mentioned above, but claim to have an equivalent Degree / Specialization / Discipline, onus of proving equivalency shall lie with the concerned applicant(s) by submitting applicable notifications issued by any Government controlling/regulatory body like MoE, UGC, AICTE, etc. Any notification and/or certification from the Institute/University/College of the applicants will not be acceptable. However, decision of the Institute shall be final and binding in this matter.

Applicants awaiting result of their qualifying degree are **NOT ELIGIBLE** for admission to Executive and Part-Time Programmes.

H. Residential Requirement / Class Timings

Students of Executive Ph.D. Programme need to attend a Contact Programme for 5 days (separately or in one go) per course during every semester till completion of course work and thereafter minimum 10 days (separately or in one go) each during every subsequent semester till their Synopsis Seminar. Accommodation in Hostel / Guest House may be provided subject to availability and on payment basis.

Classes for Part-Time M. Tech. and Executive MBA Programmes will be held for three hours in the evening [18:00 hr to 21:00 hr] for five days a week [Monday to Friday]. Number of total classes per course, Time Table, minimum attendance requirement, etc. will be notified in due course. No accommodation will be provided to students of Part-Time and Executive Programmes.

I. Special Notes

- a) All educational qualifications must be from Govt. recognized Board/University/Institute only. In case of any doubt raised by the Institute, onus of proving validity of the qualification shall lie with the concerned applicant. However, decision of the Institute shall be final in this regard.
- Applicants with any other relevant background may be considered only with specific approval of the Senate or Chairman, Senate on the recommendation of the Selection Committee.
- c) There is no relaxation in academic requirement for SC/ST/OBC/PH/PWD students, because the minimum academic requirements have been set to meet the basic challenges of the academic program. Also, the academic eligibility shall be same across all studentship categories (Institute fellowship, External fellowship, Project fellowship, Sponsored, etc.).
- d) Students of one discipline may seek admission in a related department which will be considered by the Selection Committee on the basis of merit of the individual case(s).
- e) Selection will be made on the basis of academic record, relevance of qualification and/or experience. Therefore, merely submitting application will not guarantee admission.
- f) If required, any or all the departments may conduct selection test and/or interview to judge further suitability of the applicants.
- g) Selection Criteria may be different for different departments.
- h) Part-Time Programme students must be located within short geographical jurisdiction of Rourkela to make it feasible for them to attend the classes regularly.
- All or any particular Programme may not be offered at the discretion of the Institute and if so decided, no liability will be assumed except refund of the Application Processing Fee without interest to the concerned applicants on or before **30th September 2021**.

SI. No.	Fee Head	Part-Time M. Tech.	Executive MBA	Executive Ph.D.
[A]	One-Time Fees at the time of			
1	Application Fee	1000	1000	1000
2	Admission Fee including hostel admission	2500	2500	2500
3*	Institute Emergency Fund	10000	10000	10000
4*	Caution Money (Refundable)	5000	5000	5000
[B]	Semester Fees for every Sem			
1*	Tuition Fee	90000	100000	25000
2	Other Fees (Examination, Library, etc.)	3000	3000	3000
[C]	One-Time Fees at the time of			
1	Thesis Processing Fee	Nil	Nil	20000
2	Convocation Fee	3000	3000	5000

Fee Structure for Executive Ph. D, MBA and Part-Time M. Tech. Programmes [2021-22] will be as follows:

* Fee against A-3, A-4 and B-1 will not be applicable to Institute Regular Employees joining with NOC.

Fee will be paid before admission and before commencement of every subsequent semester. Notice for payment of fees will be published in the website and may also be sent by email to the students. Late Fine of Rs. 2,000/- per month for Part-Time M Tech & Executive MBA Programme and Rs. 1,000/- per month for Executive Ph.D will be applicable for delay in payment of Semester Fees.

Refund of Fee

If a student withdraws/leaves himself/herself from the Institute after admission without completing the entire program, all fees paid including the caution money deposit will be forfeited by the institute. This clause is applicable only after admission but even before formal registration to the 1st semester and/or starting of classes.

K. Application Fee and How to Apply:

Interested candidates satisfying the eligibility criteria may submit their **online application at** <u>http://eapplication.nitrkl.ac.in</u>. The applicants are advised to:

- a) Read this advertisement and the instructions to fill up the online application form given in the online portal carefully.
- b) Pay non-refundable Application Fee of Rs. 1000/- through SBI Collect only. No other mode of payment is acceptable. The applicant has to search SBI COLLECT -> ODISHA -> EDUCATIONAL INSTITUTION -> DIRECTOR NIT ROURKELA -> APPLICATION FEE EPTP PROGRAMME. Note down the SB Collect Reference Number. Application fee once paid shall not be refunded under any circumstances.

c) Fill up the online application form and enter the SB Collect Reference Number in the appropriate column of Application Fee section and submit the same.

Applicants are **NOT** required to send hard copy of the application form or any other document(s) to NIT Rourkela. Entries made in the Application Form will be accepted provisionally for selection purpose. Applicants who will be selected for admission will be required to submit a set of photo copies of all educational mark sheets, certificates and work experience and all originals for verification at the time of admission. Admission offer will stand cancelled if any disqualification is detected at the time of admission.

F. Tentative Schedule for Application and Admission:

SI. No.	Event	Tentative Date
1	Application form will be available in the Institute website for online submission	23.06.2021 (Wednesday) to 07.07.2021 (Wednesday)
2	Publication of result of scrutiny in the website (announcement section)	14.07.2021 (Wednesday)
3	Test and/ Interview (Venue – NIT, Rourkela)/online	22.07.2021 (Thursday)
4	Publication of result of Interview in the website	27.07.2021 (Tuesday)
5	Admission (online mode)	03 - 05.08.2021
6	Semester Registration	09.08.2021 (Monday)
7	Starting of Class / Research work	10.08.2021 (Tuesday)

Applicants are required to visit the "Announcement" section in the "Home Page" of the Institute website (www.nitrkl.ac.in) regularly for updates and further notifications.

G. How to Reach the Institute

Rourkela is located in the Howrah-Mumbai main Train route. Train connections are also available from Bhubaneswar and Ranchi. Night AC/Non-AC bus services are available from all major cities of Odisha (Bhubaneswar/Berhampur/Balasore, etc.). The Institute is located around 8 km. away from the Railway Station and 2 km away from Sector-3 Bus Stop. Usual rate of auto fare at present is Rs.140/- and Rs. 80/-, respectively. App based taxi services are also available from the Railway Station to the campus.

H. Curriculum

Curriculum for the Part-Time M. Tech. / MBA and Executive Ph.D Programmes will be as follows. Syllabus will be made available to the admitted students by respective Faculty/Department.

1. Executive Ph.D.

Year	Year Semester Per Semester			
1 st Year	&	3 Courses [9 Credits]		
2 nd Year	III & IV	3 Units of RP [9 Credits], and 1 Unit of STW [2 Credits]		

3 rd Year	V & VI	3 Units of RP [9 Credits], and 1 Unit of STW [2 Credits]		
4 th Year	VII & VIII	3 Units of RP [9 Credits], and 1 Unit of STW [2 Credits]		
5 th Year	IX and X	3 Units of RP [9 Credits], and 1 Unit of STW [2 Credits]		
6 th Year	XI and XII	4 Units of RP [12 Credits]		

RP - Research Practice, STW - Seminar & Technical Writing

2. Part-Time M. Tech.

Year	Semester	Theory	Lab.	Research Practice	STW	Research Project	Viva
Credits	s per Unit \rightarrow	3	2	2	2	20	4
1 st	I	3	1	-	-	-	-
Year	II	3	1	-	-	-	-
2 nd	III	3	1	1	-	-	-
Year	IV	3	1	-	1	-	-
3 rd	V	-	-	-	-	1	1
Year	VI	-	-	-	-	1	-

3. Executive MBA

Year	Semester	Theory	Lab.	Research Practice	STW	Research Project	Viva
Credits	s per Unit \rightarrow	3	2	3	2	N/A	N/A
1 st	I	4	3	-	-	-	-
Year	Ш	4	3	-	-	-	-
2 nd	III	4	2	-	1	-	-
Year	IV	4	2	-	1	-	-
3 rd	V	4	1	1	1	-	-
Year	VI	4	1	1	1	-	-

I. Examination and Academic Regulation

Attendance and passing requirements, standards of instruction, examination and evaluation methods and other regulations for the Executive Ph. D, Executive MBA and Part-Time M. Tech. Programmes will be same as for the corresponding regular programmes which will be made available in the Institute website [https://nitrkl.ac.in/eptp] in due course of time.

J. Award of Degree

Provisional Degree and Statement of Marks will be issued immediately after publication of results.

However Degree Certificate will be issued in the Annual Convocation which is normally held on the 3rd Saturday of January.

K. Contact Us

Applicants may contact at the following details for any query and/or further information relating to application, selection and admission to the Executive Ph. D, Executive MBA and Part-Time M. Tech Programmes:

Webpage	-	https://nitrkl.ac.in/eptp
Email	-	eptp@nitrkl.ac.in
Telephone	-	+91 661 246 2030 [for Application and Admission]
		+91 661 246 2033 [for information on Executive PhD]
		+91 661 246 2032 [for information on Part-Time M. Tech. / Exe. MBA]

Sd/-

उप कुलसचिव (शैक्षिक) Dy. Registrar (Academic)