BIRLA INSTITUTE OF TECHNOLOGY
MESRA (RANCHI)
(Deemed to be University)

INFORMATION BROCHURE

ONE YEAR (2 SEMESTERS)

FULL-TIME CERTIFICATE PROGRAMME IN

GAME DESIGN & DEVELOPMENT

At

BIT Off Campus Noida

CONTACT DETAILS

Campus	Addresses and contact details
Mesra	Dean Admission & Accreditation Coordination OR Controller of Admissions OR Deputy Registrar (Admission & Accreditation Coordination) Birla Institute of Technology Mesra, Ranchi - 835215 Toll-Free:18003457057, 18003457058 Phone: PBX: 0651-2275444 / 896 / 2276496, Extn 4469, & 2275868 (Direct) E-mail: daac@bitmesra.ac.in, coa@bitmesra.ac.in, dr.aac@bitmesra.ac.in, admissions@bitmesra.ac.in

The addresses and contact details of other Campuses located in India are as given below.

Noida	Director Birla Institute of Technology, Noida Campus A-7, Sector-1 Noida 201301 Phone: 0120- 4263080: 9971120054 / 9971976336 2553661 /2553662 e-mail: bitnoida@bitmesra.ac.in

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IMPORTANT DATES

Announcement of Applications Invitation	24th May 2022
Last Date to Send Application	30th June 2022
Tentative Date for Interview	1st July 2022
Announcement of Shortlisted Candidates	7th July 2022
Last Date to take Admission	15th July 2022

Note: All dates mentioned above are tentative, and liable to be changed. Hence, please check our Institute website periodically.

Sec -1. **ABOUT BIT**

BIT, Mesra, Ranchi (Deemed to be University)

Birla Institute of Technology, Mesra, Ranchi was established in 1955 and has various centres across India and abroad with over 10,000 students. It is one of the premier academic institutions in the Indian sub-continent with repute of academic excellence for over 50 years in the field of Engineering & Technology, Management, Computers, Rocketry Science and Pharmacy. It is the first University in the country to provide a degree course in Animation & Multimedia.

BIT, Noida Campus

BIT, Noida Campus was started in 1998 with the BCA course. Since then, the Campus has seen a vast growth in various programmes at all levels. The courses being offered currently are: MCA, MBA, BCA, BBA, and B. Sc. (Animation and Multimedia). The Centre now also registers scholars for Ph.D. programmes in Computer Science and Management. There are about 50 PhD scholars registered. The Centre has a strong core faculty in all related subjects. It has location advantage to engage guest faculty from industry and institutions for specialised lectures. The location acts as a gateway to a large number of IT companies and other major corporate in NCR.

Sec 2. Introduction to the programme

The exponentially **growing popularity of games** across the world permeating through socio-economic class has made it not only viable, economically lucrative but necessary for the **academic institutions to offer** well designed programme at both the undergraduate and post graduate levels. Government of India has also made provisions in its latest budget for the growth of Animation and Gaming sectors. The growth in Gaming industry has been catalyzed by better smartphones, increased internet access, popular titles, influencers, and the global pandemic. The local entertainment and **gaming Industry too is warming up** to this for their own want of trained professionals and workforce.

India is making its **presence been felt in the Animation industry** through remarkable films like 'Bahubali' and its prominent contribution in the gaming industry as a global player. In this context, it needs to be realized that STEM (Science, Technology, Engineering, and Mathematics) students from premiere institutes like BIT Mesra has played a significant role not only through their critical creative contribution but also through their numerous start-ups and other entrepreneurial ventures that are progressively getting global recognition.

GAME DESIGN & DEVELOPMENT PROGRAMME AT BIT NOIDA

➢ Game design and development is a typical synergy of creativity and 'hardcore computing education' and feeds the game, entertainment, visualization, simulation industry in terms of trained workforce.

➢ What is very significant here is that, as a result, progressively this is becoming a singularly white-collar job market and more and more industries like training, modeling etc. are aligning to this domain creating greater demand for well-educated and trained manpower for computational game design and development.

➢ In this context, our achievement and experience of offering UG and PG courses in in Animation and Multimedia studies recognized by the UGC for over 15 years in India gives us both the maturity and the edge of being a front runner in the domain.

➢ And this gets further amplified with our core **competence as a STEM university** of national repute wherein we have very strong Computer Science, Mathematics and Engineering departments to support the inherent & intrinsic creativity of the domain with hard-core Science & Technology knowledge and capability.

SCOPE OF THE PROGRAMME

➢ As an undergraduate programme, the components creativity and computation which is inherent, intrinsic and fundamental in Game Design & Development open **huge vistas** for the learners.

➢ As is broadly realized today, instruction and training in the fundamentals and basics of Computation, IT, Statistics, Communication and Sociology opens greater opportunities for the students in the rapidly expanding gaming and related industry and for them to **enrol in universities for graduate studies** in Computer Science, Animation & Multimedia, Design for Computation Games, UI/UX and other related cutting-edge computing fields.

➢ Similarly, this foray also opens the huge possibility in pragmatic and **futuristic research & development** exercises in the domain of Infotainment, Gamification & other Development Studies.

➢ Further, with their exposure to game programming, and languages, learners can specialize in game engines and systems, game testing, game design and development, game audio, graphics, AR/VR and so on.

➢ With their training in Communication and Sociology, they get trained in game narratives, stories for games, game ethics, design characters for games and imagine contextual **culture relevant challenges** and messages for games and so on.

➢ Industry curated **internships** and training along with the demanding course work is expected to help students come up with **impressive portfolios.**

OBJECTIVE OF THE INDUSTRY-ORIENTED SKILL BASED PROGRAMME

➢ To make candidate ready to join the industry after completion of this course.

AREAS OF 'GAME' COVERED IN THIS PROGRAMME

➢ Game Art

➢ Game Design

➢ Game Development

➢ Game Level Design

➢ Game Engines

NEW AVENUES AFTER COMPLETION OF THIS COURSE

➢ Critical thinking through Gaming

➢ Game as Teaching tool

➢ Design Thinking

➢ Gamification

➢ Infotainment

➢ Entrepreneurship

PROGRAMME HIGHLIGHTS

➢ Drawing for Games: Drawings, doodles, sketches etc. are the expressions of creative thoughts of ideas. This programme is aimed at nurturing this talent of the candidates

➢ Multimedia: Graphics, Animation, Audio, Video, and Sound are integral parts of the game

➢ Game Design: What defines a "game" and the mechanics and rules behind different types of games… Board Game Exercises will help learners to understand the components of a game. This course focuses on the conceptual foundations of games, and all assignments can be completed with a pencil, paper, and colours – no previous programming knowledge is required.

➢ Game Art: Graphics, Animation, 3D Modeling, texturing, rigging and 3D Animation

➢ Game Engines: Exposure to current prevalent Game Engines like Unity or Unreal

➢ Storytelling through Games: Games are primarily meant for entertainment and can be used for education as Games have storytelling capabilities. By exploring several historical and contemporary games, learners will be asked to evaluate and interpret different games stories

and procedures for your own game ideas. We'll examine that how game narrative is structured by using strategic elements of gameplay. Ultimately, students will learn how to define character, setting, and structure to create a compelling game concept.

MoUs with INDUSTRIES

➢ Immersive Gamitronics Studios Pvt. Ltd., Hyderabad

➢ Digital Jalebi Pvt. Ltd.

➢ Digital Agents Interactive Private Limited

After completion of the course students will be able to work in the following domains:

➢ *Illustration Design*

➢ *Graphics Design*

➢ *Create Storyboards*

➢ *2D-3D animations*

➢ *Architectural and Organic-Inorganic Modeling*

➢ *Design Game Ideas as Game Design Documents*

➢ *Make games using Game Engines for Platforms like PC, Consoles and Mobile*

➢ *Can explore AR/VR (Augmented Reality /Virtual Reality) / Metaverse and new emerging interactive technologies*

Programme Features

- ➢ Exposure to cutting edge game technology

- ➢ Learn to handle multimedia for Gaming

- ➢ Appreciate Culture and notions of tradition and varying culture codes

- ➢ Learn Game graphics, game landscape, Game narratives and Storytelling for Games

- ➢ Learn how games can communicate

- ➢ Learn to manage a game development project individually and part of an interdisciplinary team

- ➢ Exposure to some Industry standard programming techniques and languages

- ➢ Work with existing game engines

- ➢ Understand how optimal and attractive challenges are woven into games in accordance with ethics, culture and platforms.

- ➢ Gain Exposure in designing immersive game design in terms of game environments and levels, game mechanics and player experiences.

- ➢ Learn Game graphics and design basic landscapes

- ➢ Learn to design characters and narratives for Games

- ➢ Appreciate games as a language for social communication

- ➢ Develop the ability to write simple stories for games & design characters for a games

- ➢ Develop proficiency for game drawing

- ➢ Learn the basics of Multimedia for games

Sec - 3. Eligibility Criteria

1. Eligibility to join this course would be XII (12th) standard pass with at least 50% marks in any stream.

2. Knowledge of Basic Multimedia Concepts is desirable.

Sec - 4. Selection Procedure

Provisional selection will be based on performance of the applicants in a Personal Interview based on various reservation criteria of State and Central Govt. However, candidates must meet the minimum academic requirements.

Sec - 5. Number of seats and Reservations

Total number of seats to be offered in 2022 is as below:

Programme	Total number of seats to be offered
Certificate Programme in GAME DESIGN & DEVELOPMENT	30

Reservations

1. For all programmes at the Institute which are supported by any of the respective State Governments, the reservation criteria for the state quota are as per the norms of the respective State Government.

  For all other programmes the reservation criteria for SC & ST are as per the statutory norms of Central Govt. (SC -15% & ST - 7.5%)

2. The Institute observes statutory reservation for Persons with Disability (5%).

3. Up to 1 seat may be allotted to the candidates who are Sons or Daughters of Kashmiri Migrant.

However, the final reservation proportion will depend on notification, if any, issued by competent authority and as accepted by the Institute.

Notes:

1. **The Institute also reserves the right not to offer a particular programme in case the number of students found to be eligible / admitted is less than sufficient in number.**

Examples for writing the name of State while filling the application form:

	State of Eligibility
Qualifying examination (Graduation) from Jharkhand	Jharkhand
Qualifying examination (Graduation) from Rajasthan	Rajasthan
Qualifying examination (Graduation) from West Bengal	West Bengal
Qualifying examination (Graduation) from Uttar Pradesh	Uttar Pradesh
Qualifying examination (Graduation) from Delhi	Delhi

Sec- 6. How to Apply

1. To fill online application form, click on the link "Apply Online" to register for the program and create password for the application process. Do not share the password with anybody. **Please see instructions for filling online application form.**

2. Eligible candidates must complete and submit the application form online only [link available on the Institute website **www.bitmesra.ac.in**].

3. Pay application fee of Rs. 1,500/- (General / OBC / EWS candidates) and Rs. 1,000/- (SC/ST candidates) through banking / debit card / credit card of any nationalized bank till the last date of application process. Fee once remitted shall not be refunded under any circumstances.

4. Candidates should proceed to fill the Online Application Form only after they satisfy themselves that they fulfill all the eligibility criteria.

Sec- 7. Required List of Documents

Candidates must carry the following documents at the time of physical reporting for verification of documents / admission as well as one set of photocopies:

1. A print-out of the duly completed online form

2. One recent colour photograph [same as uploaded on the form]

3. **Following original documents / certificates:**
    a) Pass certificate of Class X (for age proof)

    b) Marksheet of Class 10

    c) Marksheet of Class 12 / Intermediate or equivalent

    d) Caste certificate (if applicable), which **should be in proper format and signed by appropriate authority of rank not less than SDO.**

    e) Candidates belonging to other special categories (Persons with Disability [PwD] / Ward of BIT Employee / Kashmiri Migrant / Economically Weaker Section) must provide photocopy of certificate in proper format from appropriate authority.

    f) Photo identification: (Driving license, Passport, PAN Card, Voter ID, Aadhaar Card, School / College ID, are acceptable)

    g) Transfer Certificate

    h) Migration Certificate

If provisionally admitted, all the above documents in original (except the original Photo ID) together with photocopies will be retained by the Institute for some time.

Sec-8. Fee Structure

Fees payable [IN INR] for the full-time Certificate Programme in Game Design & Development Programme at Bit Noida campus for the 2022 batch

Fee payable at the time of admission and in each subsequent semester.

Particulars	1st Semester	2nd Semester
Tuition Fee	30000	30000
Examination Fee	5000	5000
Total	35000	35000

Additional amount to be paid at the time of admission.	
(i) Admission fee (one time only) = Rs. 5000.00 and (ii) Caution money (one time only- refundable) =Rs. 5000.00	**Total Rs. 10000.00**

Notes:
1. Pay Institute fee (for 1st semester), using ICICI Payment Gateway through debit / credit card and net banking of any nationalized bank. [URL of payment gateway will be shared in applicant email ids during admission].

2. Students will be expected to provide themselves with stationery and textbooks, etc, as prescribed for different subjects.

3. The Institute reserves the right to revise the fees and other charges at any stage.

4. For rules regarding refund of fees on withdrawal, please see separate Notice on Notice Boards.

Sec- 9. COURSE STRUCTURE

BIRLA INSTITUTE OF TECHNOLOGY- MESRA, RANCHI								
NEW COURSE STRUCTURE – Proposed from Monsoon 2022								
Based on CBCS & OBE model								
Recommended scheme of study for Certificate Programme in Game Design & Development								
Semester	Course Level	Category of Course	Course Code	Courses	Mode of delivery & credits			Total Credits
					L (periods/ week)	T (periods/ week)	P (periods/ week)	
Theory								
FIRST Monsoon	FIRST	Programme Core (PC)	GD101	Introduction to Games	3	0	0	3
	FIRST	Programme Core (PC)	GD103	Introduction to Programming using Python	3	0	0	3
	FIRST	Program Elective		PE-I	2	0	0	2
Laboratories / Sessional								
	FIRST	Programme Core (PC)	GD102	Exploring Game Engine	0	0	4	2
		Programme Core (PC)	GD104	Python Programming Lab.	0	0	4	2
	FIRST	Programme Core (PC)	GD106	2D Game Art	0	0	4	2
	FIRST	Programme	GD108	3D Game Art	0	0	4	2

		Core (PC)						
FIRST	Project		GD110	Field Project or Portfolio	0	0	0	4
				Total				**20**

Semester	Course Level	Category of Course	Course Code	Courses	Mode of delivery & credits			Total Credits
					L (periods/ week)	T (periods/ week)	P (periods/ week)	
Theory								
SECOND Spring	FIRST	Programme Core (PC)	GD151	UI/UX Design	2	0	2	3
		Programme Core (PC)	GD153	Pre-Production for Games	3	0	0	3
	FIRST	Program Elective		PE-II	2	0	0	2
Laboratories / Sessional								
	FIRST	Programme Core (PC)	GD156	Animation For Games	0	0	4	2
	FIRST	Programme Core (PC)	GD158	Game Engine	0	0	4	2
	FIRST	Project	GD160	Internship / Guided Project - II				8
Total								**20**

Total Credits: 40

List of Program Electives

	Course Code	Name of the PE courses	L	T	P	Credit
PE1	GD111	Communication Skills	2	0	0	2
	GD113	Creative Writing for Games	2	0	0	2
PE2	GD161	Digital Marketing	2	0	0	2
	GD163	Entrepreneurship	2	0	0	2

Sec10. Discipline, Rules and Regulations

Institute Rules & Regulations: For details of Institute rules and regulations, please see booklet provided at the time of admission.

Discipline

The Institute places a very high emphasis on discipline of students both inside and outside the campus. Students must abide by the Institute rules and agree to conform to the rules and regulations enforced from time to time. They must not do anything either inside or outside the Institute that will interfere with its orderly governance, discipline and image. Students must attend lectures, tutorials and practical classes regularly. A minimum attendance of 80% in lectures, tutorials and sessional for each subject is essential for appearing in the Semester Examinations as per norms of Pharmacy Council of India (PCI). Thus, students should attend all theory and laboratory classes from the first day of the academic year. In case of absence due to unavoidable circumstances, students are advised to take prior permission from the Dean / Head. In case of absence due to illness, students will have to produce a Medical report signed by attending Physician / Surgeon with an application from their parents or guardians. In such a case, parents/guardians should inform the authorities immediately. Students should strike a proper balance between extracurricular activities and academic requirements. A student's participation in extra-curricular activities should not be allowed to interfere in his/her academic schedule.

During teaching hours, the main lobby, the library, the corridors of the Institute and the area surrounding the Institute are to be observed as silence zones. Students must not cause any disturbance / obstacle in these zones. Students must not indulge in any kind of misconduct or indiscipline or anti-social activities within or outside the campus. Students must not form a group causing any hindrance to the academic and administrative activities of the College. Those found doing so will be punished and strict disciplinary action will be taken by the authorities. Students shall not damage the property of the Institute. Cost of such damage will be recovered from students, parents/guardians of the students.

Students must always carry their Identity Card and produce it on request. In case of loss or damage of Identity Card, the concerned authorities should be informed immediately.

Students should park their cycles in an orderly manner at the cycle stands. Students should follow the rules of the Canteen. Students are advised to read the Notice Boards regularly.

Students are strictly prohibited from possessing or consuming spirits, tobacco products and narcotic drugs either within or outside the campus, and if found violating this will be rusticated immediately, without warning.

Ragging in any form inside or outside the campus is strictly prohibited by law. Any students found ragging other students will be summarily expelled from the Institute and dealt with as per the directive of Hon. Supreme Court/Hon. High Court.

Each student must read the "UGC Regulations on Curbing the Menace of Ragging in Higher Educational Institutions, 2009" on the UGC website. Each student admitted to any of the Institute's programmes must submit the two completed affidavits [one from candidate and one from parents] at the time of admission. [for details please refer last page of this Information Brochure].

Applicability of Regulations for the time being in force, Disclaimer and Legal Jurisdiction:

In Force

Notwithstanding the nature of a programme spread over more than one academic year, the regulations in force at the time a student joins a programme shall hold good only for the examinations held during or at the end of the semester. Nothing in these regulations shall be deemed to debar the Institute from amending the regulations subsequently and the amended regulations, if any, shall apply to all students old or new, as specified therein.

Disclaimer

The statements made in this Information Brochure and all other information, contained herein is believed to be correct at the time of publication. However, the Institute reserves the right to make at any or without notice, changes in and additions to the regulations, conditions governing the conduct of students, requirements for degree, fees and any other information, or statements contained in this Information Brochure. No responsibility will be accepted by the Institute for hardship or expense encountered by its students or any other person for such changes, additions, omissions or errors, no matter how they are caused.

Legal Jurisdiction

All disputes will be subject to jurisdiction of the Civil Courts at Ranchi city only.

Annexure – I

Sec – 8 Procedure for submission of Anti-ragging Affidavit [during admission]

Step 1:

A student should submit his/her details on the following below mentioned websites

1. **www.antiragging.in**   OR

2. **www.amanmovement.org**

Read and confirm that you and your parents/guardians have read and understood the AICTE regulations on curbing the menace of ragging. You should then confirm & agree that you will not engage in ragging in any form.

Step 2:

You will receive an e-mail with your registration number and a web link. You have to forward the link to the Institute Nodal Officer in the below mentioned email ID.

Please note that you will not receive any pdf affidavits and you are not required to print & sign it as used to be the case earlier.