



**SASTRA**

ENGINEERING • MANAGEMENT • LAW • SCIENCES • HUMANITIES • EDUCATION

DEEMED TO BE UNIVERSITY  
(U/S 3 OF THE UGC ACT, 1956)

THINK MERIT | THINK TRANSPARENCY | THINK SASTRA

# ONLINE MCA

LEARN GAME PROGRAMMING FROM  
INDUSTRY PARTNER AID

# ABOUT MCA WITH GAME PROGRAMMING FROM AID

The Master of Computer Application (MCA) is a post graduate program designed to provide students with in-depth knowledge and skills in various aspects of computer science and applications along with the opportunity to specialize in the domain of game programming that is much in demand currently. This course combines theoretical foundations with practical training, equipping students to excel in software development, database management, networking, systems analysis and game programming. Through a comprehensive curriculum, MCA students gain expertise in programming languages, algorithms, data structures, and software engineering principles. Students also get practical, in-depth and relevant knowledge of concepts and skill requirement in area of game design and development. With a strong emphasis on hands-on projects, the MCA program prepares graduates for rewarding careers in the much in demand area of online gaming.





# LEARNING OUTCOME

The online MCA programme will equip students with the necessary theoretical knowledge and practical skills in the world of computing and game programming that will enable them to understand the design of complex computer applications.

**ON THE SUCCESSFUL COMPLETION OF THIS PROGRAMME, THE STUDENT WILL BE EXPECTED TO POSSESS THE FOLLOWING:**



Strong foundation of computer applications and information technology.



Skills to develop and work with real-time applications.



Communication skills, managerial ability to analyze, design, develop, deploy and maintain software projects.



Develop games for web and mobile platforms.



Create AR and VR experiences

# PROGRAMME HIGHLIGHTS

## RECOGNIZED MCA FROM A TOP RANKED UNIVERSITY

Earn a credible and recognized MCA degree from India's top ranked University. SASTRA is ranked #26 amongst Universities as per NIRF Rankings 2023.

## EXPOSURE TO EMERGING DOMAINS LIKE GAME PROGRAMMING

Between the mandatory courses and specialization subjects in game programming, students have the opportunity to pursue knowledge and expertise in developing games, building their own work portfolio and showcasing the same to potential employers.

## IMMERSIVE LEARNING THROUGH PROJECT WORK

Students will have the opportunity to work on development projects that will provide hands on experience in 3D/2D, Multiplayer, AI/ML, and AR/VR based game programming. Students, through their practical projects, create game prototypes and engage in game development workshops, gaining real-world experience that goes beyond theoretical knowledge.

## INTERNSHIP (THROUGH INDUSTRY PARTNER AID)

Students will have the opportunity to pursue a 3 month onsite/remote internship, provided by AID as a part of this programme. Students will also receive live guidance and assistance through 2 live virtual sessions held every week during the internship period.

## ALL ROUND PERSONALITY DEVELOPMENT

In addition to pursuing courses that are focussed on building technical competencies, students also get the opportunity to do courses that will help with professional communication and individual personality development.



### **PLACEMENT OPPORTUNITIES (THROUGH INDUSTRY PARTNER AID)**

AID maintains strong hiring partnerships with various companies and game studios staying abreast about the type of job openings available in the gaming domain. The projects and internships completed by students as a part of this MCA programme is mapped to and connected with suitable available openings at that time. Depending upon candidate suitability and fitment, upon successful completion of this programme, student will have the option to pursue multiple career options like game programmer, game designer, level designer, gameplay programmer, game tester etc.

### **PARTICIPATE IN JOB FAIRS ORGANIZED BY SASTRA**

Students of the Online MCA programme, are also welcome to participate in the Job Fairs and other placement events organized by SASTRA on campus.





# PROGRAMME DETAILS



## DURATION

- 2 Years (Four Semesters)



## ELIGIBILITY

- Graduate/Bachelors degree (10+2+3 or 10+2+4) or equivalent in Computer Science / Computer Applications / Mathematics / other relevant stream from a recognized university



## MEDIUM OF INSTRUCTION

- English



## SALIENT FEATURES

- Strong brand image of SASTRA in the corporate sector
- Interactive learning content and Self Learning Materials (SLM)
- Personal contact classes
- Highly qualified and experienced faculty
- Affordable fee structure with loan facility at attractive rates
- Internal Assessment – 30 marks + End semester Exam - 70 marks
- Project based training on Game Programming
- 3 month internship through Industry Partner AID



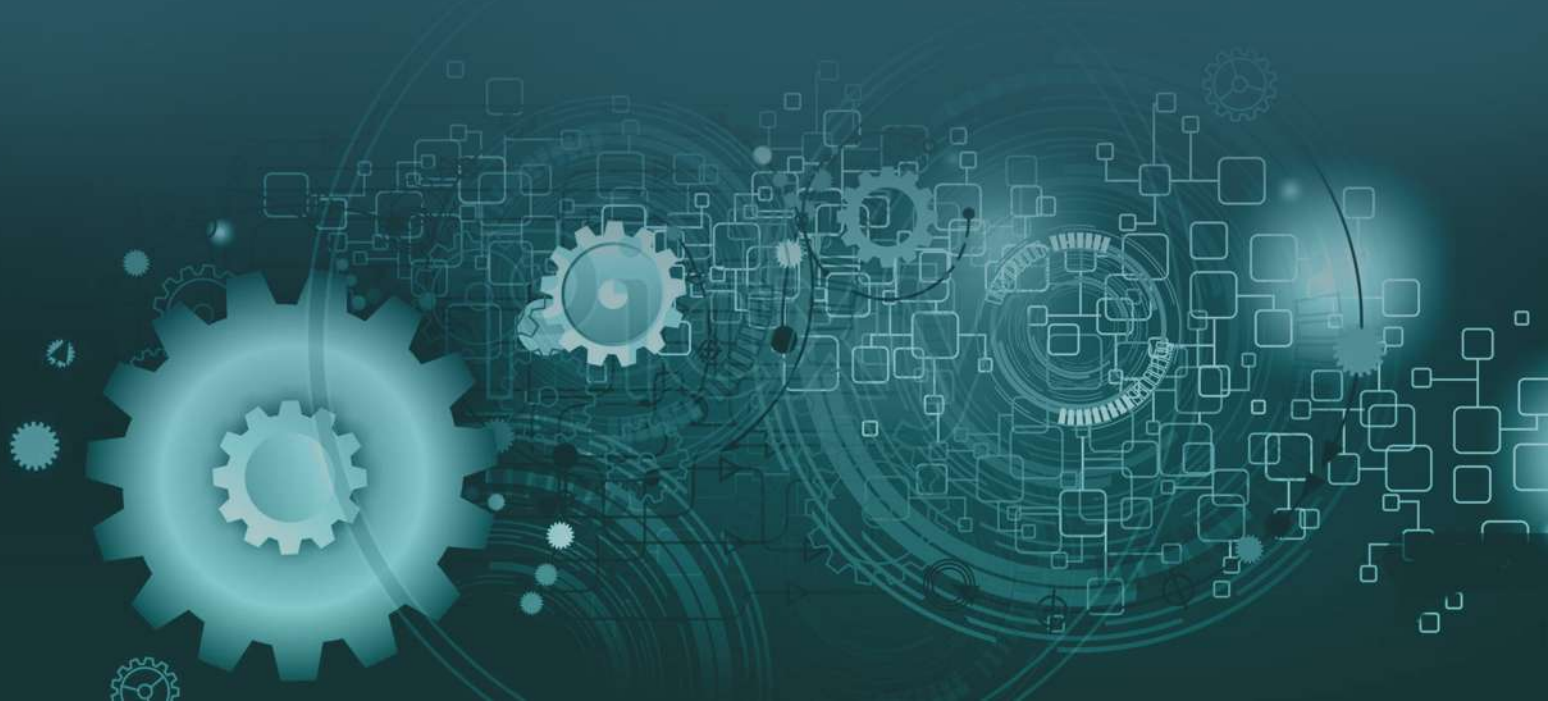
# CURRICULUM

## SEMESTER I (20 CREDITS)

<u>COURSE NAME</u>	<u>CREDITS</u>
Data Structures & Algorithms	3
Numerical & Statistical Analysis	3
Computer Organization & Architecture	3
Operating Systems	3
Introduction to Game Development and Unity Game Engine	4
Data Structures & Algorithms Laboratory	2
Operating Systems Laboratory	2
Soft Skills – 1	0
<b>TOTAL</b>	<b>20</b>

**SEMESTER II (21 CREDITS)**

<u>COURSE NAME</u>	<u>CREDITS</u>
Database Management Systems	3
3D and 2D Game Development Using Unity	4
Mathematics for Game Development & Game Programming Patterns	4
Mathematical Foundation for Computer Science	3
Software Design & Testing	3
Advanced Java Programming (Semi Theory & Semi Practical)	2
Database Management Systems Laboratory	2
Soft Skills – 2	0
<b>TOTAL</b>	<b>21</b>





**SEMESTER III (21 CREDITS)****COURSE NAME****CREDITS**

Algorithm Design &amp; Analysis

**3**

Web Technology (Semi Theory &amp; Semi Practical)

**3**

Big Data Analytics

**3**

Multiplayer Game Development Using Unity

**4**

AI &amp; ML in Game Development Using Unity

**4**

Algorithm Design Laboratory

**2**

Big Data Analytics Laboratory

**2****TOTAL****21**

**SEMESTER IV (18 CREDITS)**

<u>COURSE NAME</u>	<u>CREDITS</u>
Theory & Practices of Artificial Intelligence (Semi Theory & Semi Practical)	3
Network Principles & Protocols	3
AR & VR Development Using Unity	4
Machine Learning Techniques & Applications	3
Project Work & Viva Voce	5
<b>TOTAL</b>	<b>18</b>

**CREDITS DISTRIBUTION**

SEMESTER	I	II	III	IV	TOTAL
COURSES	8	8	7	5	28
CREDITS	20	21	21	18	80





## ABOUT AID

AID or Asian Institute of Design was founded as the first institute dedicated to Game Development in India followed by Animation and Game Programming to cater to the progressing AVGC (Animation, Visual Effects, Gaming and Comics) industry and increasing demand for skilled professionals. The expert faculty at AID, engage with students through practical project and hands-on learning and guide students in their respective portfolio development, ensuring that they are well-prepared for future careers in the gaming domain. AID, its faculty and alumni and all well entrenched in the gaming industry paving way for AID to develop and maintain strong hiring partnerships with various companies and game studios.

## ABOUT SASTRA

With a humble beginning in the year 1984, SASTRA's progress in the last 36 years is a testimony to its commitment to build a University as envisaged in its guiding model. Today, SASTRA is one of India's premier institutions offering undergraduate, postgraduate & doctoral programmes in Engineering, Management, Law, Sciences, Humanities and Education. It was conferred Deemed-to-be-University status in 2001 by the University Grants Commission under Section 3 of the UGC Act 1956. SASTRA also has an MHRD-notified off-campus named Srinivasa Ramanujan Centre (SRC) at Kumbakonam.

As a comprehensive University, its teaching programmes are complemented by research engagements, consultancy assignments, training and extension activities. It had been re-accredited by NAAC (fourth cycle) with a maximum grade of 'A++' (3.76/4.00) and is a Category I Institution based on the UGC's categorization of Universities for Graded Autonomy Regulations, 2018. Twelve engineering programmes of SASTRA have been internationally accredited for a period of 9 years by the Institution of Engineering & Technology (IET), UK recognizing SASTRA's academic excellence. In the NIRF ranking, SASTRA has always been placed among the top 40 Universities with a current position of 22 in 2022. It is also recognized as a Scientific & Industrial Research Organization by the Government of India.



# PROGRAMME FEES

	SEMESTER FEE (EVERY SEMESTER)	ANNUAL FEE (EVERY YEAR)	TOTAL FEE (FOR 2 YEARS)
PROGRAMME FEE	INR 50,000	INR 1,00,000	INR 2,00,000
UPFRONT PAYMENT DISCOUNT	--	INR 10,000	INR 25,000
NET PAYABLE TOTAL FEE	INR 2,00,000	INR 1,80,000	INR 1,75,000

## FEE INCLUDES

- Interactive learning content and Self Learning Materials (SLM)
- Live interactive sessions with Sastra faculty and contact classes as specified
- Live guidance from Industry Partner AID's faculty and experts
- Internship opportunities through Industry Partner AID
- Semester exam fees for all 4 semesters
- Convocation Fee

## FEE DOES NOT INCLUDE

- Re-exam fees for any subsequent attempts
- Any other administrative charges that are not covered above

## PAYMENT OPTIONS

### OPTION 1

Pay Semester 1 fee upfront and thereafter opt to pay the balance as interest free EMIs

### OPTION 2

Pay the annual fee upfront on or before the specified last date and avail upfront payment discount.

### OPTION 3

Pay the full programme fee on or before the specified last date and avail upfront payment discount.

### OPTION 4

Avail loan/financial assistance. Terms and conditions apply.





**For Admission Related Inquiries**

**Visit Us At:** [sastraonline.com/mca-gaming-specialization](https://sastraonline.com/mca-gaming-specialization)

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