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## Manav Rachna International School (Admission Brochure 2011-12)

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### IMAGINING BEYOND THE LIMITS OF TODAY TO CREATE A BETTER TOMORROW

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“All great advancements originate from a new flight of imagination. The decisions we make today help students become protagonists for their own ideas, perspectives and causes. Students need to have knowledge and skills that can be applied in ever-changing situations. They need versatility and the confidence to trust their instincts. They need the discipline to reach their full potential.

MRIS endeavours to develop these capabilities, and produce students who become engines of culture and economy, who stretch their possibilities and bring the energy and verve of their priorities to global attention.”

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### About Manav Rachna Educational Institutions (MREI)

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Manav Rachna International University is dedicated and committed to train and equip its students with latest knowledge and skills in the chosen fields in the back drop of Indian ethos and values to enable them to face any global challenge with a view to transform them into insightful, honourable and responsible citizens of this great Country; and to imbibe a work culture of theoretical and applied research leading to creation and dissemination of knowledge.

Manav Rachna Educational Institutions (MREI), founded in 1997, has grown to become one of the best education entities in the country and have built a reputation for excellence in professional education and research. A brainchild of renowned educationist & philanthropist, Dr. O.P. Bhalla. Manav Rachna Educational Institutions now encompasses Manav Rachna International University. Originating in 1997, Career Institute of Technology and Management (CITM), an esteemed educational entity gained deemed university status, Now it has evolved into Manav Rachna International University (MRIU), a visible symbol of knowledge and experience. a deemed-to-be University under section 3 of UGC Act, 1956, Manav Rachna College of Engineering, Manav Rachna Dental College, Faridabad Institute of Technology, M.R. College of Education and Manav Rachna International Schools (Sector-21C, Sector-14 & Eros Garden Faridabad and Sector-46 & Sector 51, Gurgaon) providing high quality education in the fields of Engineering and Technology (B.Tech. / M.Tech. / Ph.D.), Management (BBA / MBA / Ph.D. in various specializations), Health & Applied Sciences (BDS / BPT / MPT / B.Sc. & M.Sc-Nutrition & Dietetics / B.Sc.-Hotel Management / Ph.D.), Computer Applications (BCA / MCA /



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B.Sc. Information Technology / Ph.D.), Creative Design Courses (B.Sc.-Interior/ Graphic / Fashion and Animation Film Design), Media Studies (BJMC / MJMC / BA-Media Management / Ph.D.) Education (D.Ed. / B.Ed. / M.Ed. / Ph.D.) and School Education (Arts / Science / Commerce). All these institutions lay emphasis on employable technical and soft skills including communication, team building and leadership, positive attitude and above all a superior belief in self. The focus at MREI is on all round personality development to enable the pass-outs to face any global challenge. Reputed employers and academic experts are involved in development of competency based curricula aimed at problem solving capabilities.

MREI campuses are now spread over 100 acres of lush green and supportive environs in the NCR catering to 20000 students on rolls and alumni base of 8000 contributing towards national building in all walks of life. MREI endeavours to spread its wings far and wide in years to come. In the immediate horizon is a 25 acre campus in Rajiv Gandhi Education city at Kundli (Sonapat) spread over 6,000 acres.

## About Manav Rachna International University (MRIU)

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Originating in 1997, Career Institute of Technology and Management (CITM), an esteemed educational entity, gained deemed university status. Now, it has evolved into Manav Rachna International University (MRIU), a visible symbol of knowledge and excellence.

MRIU - Manav Rachna International University is an embodiment of Manav Rachna Vidyantariksha which signifies the creation of human beings or individuals with attention to all components of holistic growth. The concept of 'Manav' is accorded the fundamental status. With special emphasis on development of healthy emotional quotient."Vidyantriksha" is a conjugation of the words 'vidya' and 'antariksha'. Vidya is knowledge, information, the basis of creativity and innovation. It is the foundation of technology and envisages the future. Antrikhsha means 'the sky', the space in which we belong or exist. It can be broken into 'Antar'and 'Iksha' which means inner desire. Hence in combination the core promise of Manav Rachna is to create such human beings who have inner desire to gain knowledge.



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### ORGANISATION

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MRIU is organized on Faculty basis and presently consists of the following Faculties:

- Faculty of Engineering and Technology (FET)
- Faculty of Business Administration and Computer Applications (FBC)
- Faculty of Management Studies (FMeS)
- Faculty of Media Studies (FMS)
- Faculty of Applied Science (FAS)
- Faculty of International Studies (FIS)

Each of these Faculties offers a wide range of courses.

### INNOVATION

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At MRIU, the spirit of innovation defines us. Creativity being the hallmark of our faculty, their new ideas help in transforming the future of the students. Frequent introduction of their new ideas into classrooms ensure that the students imbibe a culture of innovation.

### KNOWLEDGE

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MRIU has well qualified, experienced faculty to conduct all its programme of study. They all are adept at preparing students for tomorrow's needs – being themselves fully aware of the present and future environmental needs.

### SIZE AND SCOPE

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MRIU provides vast opportunities to acquire both fundamental and specialized skills. With our wide variety of courses, you have the flexibility to pursue the areas that most interest you, even to create an individualized major. You'll leave MRIU with high level knowledge and range of skills to master new challenges, expand your choice of careers, or reposition yourself in a new industry.



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## LEADERSHIP

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At MRIU, you learn the rope tricks of leadership. Our hands-on learning methods ensure that students have ample opportunities to build on the skills of organization, persuasion, and team building that recruiters value in graduates while recruiting them for their organisation.

## STUDENT LIFE

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There is more to student life than study alone! It is exciting, vibrant and always diverse at MRIU. The campus community is made up of students and staff. MRIU is committed to cultural diversity and its enrichment of social and academic life.

## LEARNING & TEACHING

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MRIU offers high quality undergraduate and post graduate programmes in a comprehensive range of disciplines, providing contemporary education that builds successful lives and careers for students and graduates. The programmes provide the students with a richness of practical experiences that contribute to the qualities for which MRIU graduates are known and which ensure that they have excellent outcomes.

## INFRASTRUCTURE

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MRIU has world class infrastructure, which alone can provide an environment conducive to effective teaching and learning.

## STUDENT ACCOMMODATION

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MRIU provides affordable, high quality accommodation that gives a rich and balanced living and learning environment. Students are encouraged to choose a form of accommodation that suits their lifestyle.



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## Chief Patron's Message

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" The world is an oyster for MRIS students. Here, we are forever endeavouring to make the educational experience rich and sound. In fiscal year 2009-2010, we took the quantum leap towards many new initiatives.

MRIS has entered into a collaboration with ICarnegie, a wholly owned subsidiary of Carnegie Mellon University, USA for state-of-the-art curricula in Robotics Education and CS-STEM. This opens a new window for children.

A tie-up with International Primary Curriculum (IPCTM), UK , has brought in global curriculum standards at the primary and elementary level. Smart class programmes with learning center approach in tech integrated classrooms (for early years) has also been introduced at MRIS. This is a step into tomorrow. Not only this, the sports infrastructure has been enhanced and improved.

Few instances are the half sized Olympic swimming pool, Manav Rachna Taylor Made Golf Academy, a world-class golf academy in association with the renowned Taylor Made Golf Academy, USA. And also, an arena for basketball and lawn tennis in Gurgaon. On the anvil is a proposal for preparing synthetic courts and sports material with worlds number one, Yonex Sports. Now, children will gain from more sports exposure.

The new Manav Rachna Academy of Performing Arts is yet another step towards learning and achieving high standards of creativity. The Manav Rachna shooting range empowers promising shooters with cutting edge skills, to win challenges.

Indeed, at MRIS, we offer a comprehensive educational experience, laced with sound knowledge and a memorable schooling experience. You are invited to join in this educational discovery."

**Dr. O P Bhalla**

### **Chief Patron, Manav Rachna International School**

*Dr. O P Bhalla is a path breaking educationist and visionary founder of Manav Rachna International University, Manav Rachna International Schools and other group institutions. A futurist who dares to dream and pursue till fulfillment and beyond. Manav Rachna International School treasures his vast educational and administrative experience. His vibrant spirit is the school's propelling force...*



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## Director's Message

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MRIS operates a state-of-the-art school system balancing traditional academic rigour with modern day ideas. The administration and staff strive to provide a quality education for a diverse set of children. Our school is a community of learners in which all children are encouraged to achieve academic and social success, to enjoy learning, to celebrate diversity, to develop analytical skills, and to model exemplary behaviour. We empower our students to take responsibility for their own learning. They are active participants, and every child has a responsibility not just to perform a task, but to do it to the best of her or his ability.

Our staff works together to create a nurturing environment so that students can take risks without anxiety, can think critically, and are encouraged to ask questions about their learning and their world.

We are committed to partner with students, parents, teachers and community members to develop confident, responsible, compassionate, cooperative and creative students. Our commitment is to provide a safe and academically rigorous environment that challenges all students to rise to their highest potential. As also, to provide students the opportunity to gain experience in locating information and to encourage students to be self-directed, lifelong learners.

**Dr. A. V. Bhalla**

**Director, Manav Rachna International School**

*Dr. A. V. Bhalla is an award winning educationist, widely travelled, pioneer in public school education and author of many books for CBSE. He has been Founder Principal of DAV Public School, Sector 14, Faridabad and instrumental in spreading the DAV school network at the district level.*



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## Manav Rachna International School (Admission Brochure 2011-12)

### Director's Message

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At MRIS, we think beyond the borders of our experiences to meet children's needs.

We create experiences, environments and relationships that enable children to thrive and discover their full potential.

We immerse children in a culture that values their humanity, nurtures their individuality and unleashes their intelligence. Here, children discover their passions, develop self-definition, self-confidence and self-assurance, as well as the belief that they can make a useful contribution to their community and country.

MRIS' teaching methodology frees children's ability to navigate the learning process smoothly.

We enable children to understand the world around them, weigh the information being presented to them and make judgments about what it means. We aim to inspire young minds to ask questions and not be afraid of making mistakes.

Not only this, MRIS fosters vibrant and original voices in its students.

We let not only the children but also the entire community to grow, dream big and imagine bigger possibilities for our collective future.

May we invite you to join us on the exciting frontier of new knowledge and a bright, unlimited future."

#### **Mr. Anil Umre**

#### **Director-Administration, Manav Rachna International School**

*Mr. Anil Umre is an alumnus of Hindu College, University of Delhi, with Business Management qualifications from Delhi Institute of Management, Delhi. In his 37 years of professional career, he has accumulated rich experience in Industry & Education and served in various senior positions as Director and President of a number of companies. During his tenure in different companies, Mr. Umre has gained tremendous exposure in corporate environment and travelled extensively to USA, Canada, Europe, Gulf countries and countries in the Far East on various important assignments. He is now Director-Administration of Manav Rachna International Schools.*



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## Principal's Message

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To my mind, an educational institute is not just about bricks, mortar and concrete, but about building character, enriching minds and about enriching experiences that last a lifetime.

Life is not a set of instructions but is a series of experiences and learning process. A school is no exception. This is where MRIS steps in, to make a difference and where learning is not just restricted to instructions but a passion, which goes beyond books, beyond instructions, beyond learning horizons.

At MRIS, we believe in learning by capturing set of experiences and enable one to explore new realms of wisdom.

Schools efforts are directed to accommodate and address the expectations of each student by way of enabling them to participate in various interactive programmes organized in and out of the institute.

The school is also engaged in supporting the students to refine the necessary skills, attitudes and aptitude in various ways.

### **Sanyogita Sharma**

#### **Principal, MRIS Sector 21-C & Eros Gardens, Charmwood Village, Faridabad**

*Sanyogita Sharma, MA (English), B.Ed. began her career as an English lecturer in women's college of Amritsar. She joined DAV Public School Sector 14 as PGT English in 1989 and was designated as the headmistress in 1993. With 2 decades of experience, she has been Principal MRIS Sector-21C for 5 years & now in Charmwood Village.*



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## Principal's Message

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“A mirror to the past. And a vision for the future. A reminder of things past - of successes, hopes and dreams fulfilled and a promise of even brighter things to come” This is what effective functioning is all about.

MRIS has become a center for excellence in the field of education within a short span of its existence. The School has carved a special niche for itself in a short span of time and aims at the holistic development of children.

The School prepares the students to meet the challenges of life and moulds them into civilized and better citizens. We help the students to identify their talents and develop them to the optimum.

The students are exposed to the right learning environment under the guidance of qualified and dynamic teachers.

I hope that each student will have an enjoyable, rewarding, and positive experience at MRIS.

**Ms. Mamta Wadhwa**

**Principal, MRIS Sector 14, Faridabad**

*Ms. Mamta Wadhwa, MA (Pol. Sc.), B Ed. and specially trained in pre-primary education has to her credit, a rich experience of 22 years. Earlier, she has been the Principal of Ryan International School, Faridabad. She is now Principal of MRIS Sector-14 for 4 years.*



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## Principal's Message

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An institution is made on four pillars—its members, their values, character and spirit that build a sound foundation, promoting oneness. Like Thomas Edison once said, “There is no substitute for hard work” and with this common thread of thought running throughout all of Manav Rachna’s branches, this school is bound to find its way into the hall of fame.

The passion to raise the bar of education is a mutual goal I share with the founders. I have always strived for the best—one of my personal reasons of being a member of Manav Rachna—it is being the best at what you are. With hard work and commitment, I and my team intend on seeing the school following the same sigmoid-curve as its sister-concerns.

With the ever increasing levels of competition in the education sector, there is always a pressure of moving beyond expectations, creating new milestones and benchmarks. At Manav Rachna International School, we take the responsibility of creating the future CEOs, MDs, and entrepreneurs for this fast changing country, by providing students with a stimulating and enriching learning environment.

### Dhriti Malhotra

#### Principal, MRIS Sector 46, Sector-51, Gurgaon

*Ms. Dhriti Malhotra, MA (English) B.Ed. with almost 2 decades of rich experience behind her, began her career as a Primary school teacher and went up the ladder with portfolios such as Junior School Supervisor, Senior School Supervisor, Headmistress, Vice-Principal and finally the Principal. She has held the reigns of Ryan International School, Vasant Kunj and Scottish High International School, Gurgaon as the Principal for a number of years. As Principal, she is now steering MRIS Gurgaon to new boundaries.*



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## Manav Rachna International School (Admission Brochure 2011-12)

# Heading in The Right Direction

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**Seema Malhotra**

**Headmistress**

**Sector-51, Gurgaon**

**M.A.-Sociology, B.Ed.**

She is trained in Cambridge International Examination Teacher's Training Programme, Primary Years Programme (PYP) of International Baccalaureate. Ms. Malhotra is also a trained yoga teacher, beginning her career as primary teacher, having worked in reputed schools such as Ryan International School, D.A.V. Public School, Faridabad, Cambridge Public School, Bengaluru, Scottish High International School, Gurgaon. She has almost 20 years of teaching experience and is now the Headmistress.

**Deepika Sachar**

**Headmistress**

**Sector-21C, Faridabad**

**M.A-History, B.Ed..**

She started her career from DAV Public School, Sector 14 Faridabad as PGT History. With more than a decade of illustrious experience, Ms. Sachar has been associated with MRIS 21-C for more than 4 years now. More than a teacher, she carries forward the torch of educational renaissance deeply in her heart and mind. She puts theory into practice and has over the years, evolved and is now Head Mistress of the school.



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## Manav Rachna International School (Admission Brochure 2011-12)

**Neelu Sharma**

**Headmistress**

**Sector-46, Gurgaon**

**B.Sc, B.Ed.**

She began her career as a Primary School teacher. Ms. Sharma has almost 20 years of experience behind her. She is dedicated and was one of the founder teachers of DPS Bangalore as well as DPS, Gurgaon. She specializes in Primary School Education and held the position of Principal at Modern Montessori International School. As headmistress, she continues to impart her valuable inputs to make learning meaningful and enjoyable.

**Minakshi Sharma**

**Headmistress**

**Sector-14, Faridabad**

**M.Com, B.Ed.**

She started her career in 1983 in the CBSE affiliated schools like DAV and Ryan International School at Faridabad. Ms. Sharma has accumulated rich academic and administrative experience of approx 23 years and utilises it to further the cause of true education in a meaningful manner. She is presently working as Headmistress-Secondary School in MRIS 14.

**Monika Kathuria**

**Headmistress**

**Sector-14, Faridabad**

**M.A-Eng, B.Ed.**

She is also specially trained in pre-primary education and started her career in 1999. Ms. Kathuria has worked in prestigious schools of Faridabad like Eicher School & MVN Aravalli Hills. She has a treasured and value-added experience of 10 plus years in pre-primary education. She is presently working as the Pre-primary Headmistress at MRIS 14.



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## Manav Rachna International School (Admission Brochure 2011-12)

# SCHOOLING UNLIMITED

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MRIS is about the spirit, morals and ethics of life. The spirit, that makes human beings humane, pervades the school, moulding students to steer the future. A natural and tranquil institution, it nurtures an ideal educational environment for both students and teachers. A blend of tradition and modernity, this institution imparts a natural impetus towards a MRite's quest for excellence. The beauty and invigorating atmosphere with centrally air-conditioned campuses of the school are a result of its unique setting.

The school offers a rich variety of activities and opportunities for a multi-dimensional growth, making an MRite an articulate, amiable and affable person. The environment encourages a questioning mind and gives student many avenues for expressing their creativity and building their skills.

Manav Rachna, the quality educational movement has further expanded, taking the number of MRIS to five. Incepted in 2006, MRIS Sector-21 C enjoys the status of being first school started by Manav Rachna Educational Institutions. ISO 9001-2000 & 14000-2004 certified, the school is situated in the exclusive Sector 21 C of Faridabad. Inspired by a clear vision, the school teaches its young scholars from Toddlers to Grade V to aspire for the impossible, to dream and strive to transform into reality. Came 2007 and MRIS branched out to yet another campus in Sector 14 upto Senior Secondary level sprawling over 5 acres in Faridabad. This school is affiliated to CBSE upto Senior Secondary level and offers a winning platform to students. In June 2008 Manav Rachna International School (MRIS), Gurgaon came into being. The school provides unique and supportive environs to learn and grow in a 5.15 acres campus, in the heart of millennium city, Sector-46, Gurgaon with the International Primary Curriculum (IPCTM), UK and affiliation from CBSE, New Delhi, upto Senior Secondary level.

In 2009, MRIS branched out across Delhi NCR with two more new schools at Eros Garden, Charmwood Village, Faridabad and Mayfield Gardens, Gurgaon. MRIS Charmwood Village will be a senior secondary school at Eros Gardens, with complete amenities, which will be also accommodating students from MRIS 21C from Grade VI onwards, while MRIS Mayfield Gardens, Gurgaon is a dream school of every child with admissions open for the session 2011-2012 for classes Toddlers to Grade VI.

## VISION

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“To emerge as the best choice in education”.



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## Manav Rachna International School (Admission Brochure 2011-12)

### MISSION

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MRIS' primary aim is to develop a child harmoniously and

holistically by emphasizing on his physical, cognitive, emotional, aesthetic, social and spiritual needs and development.

The school will focus on the attainment of full potential of every child in each classroom in all

areas of activity. The school focuses on total personality development; conceptual ability and skill development through our own exclusively developed and structured curriculum and very methodical curriculum transaction.

Every child gets freedom and space for individual expression and growth to become self reliant, self-motivated and a confident human being.

Enhancing child's communication skills, exposure to latest technology and learning techniques and

interaction with the best of resource people is our prime concern.

### SCHOOL EMBLEM

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The school carries forward the mantle of excellence and professionalism with the philosophy of Manav Rachna "Vidyantariksha".

This is a conjunction of the words 'vidya' and 'antariksha'. Vidya' means knowledge, information, the basis of creativity and innovation. It is the foundation of technology and envisages the future. 'Antariksha' means 'the sky' the space which we belong to or exist. It can be broken into 'antar' and 'Ikshan' which means inner vision. Hence the combination, the core promise of Manav Rachna becomes the reality of "Inner vision or root of all knowledge".

The elegant and colourful insignia of the school which seems to be simple MRIS Manav Rachna International School, actually shows International brotherhood and joining of hands for creating better human beings throughout the world. All students should be proud of wearing it on their uniform.



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## Manav Rachna International School (Admission Brochure 2011-12)

### LOVE AND CARE

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Manav Rachna International School (MRIS) is child-friendly and education-friendly, helping create lifelong learners.

At MRIS, we believe love is patient and kind, love is not ill mannered or selfish or irritable, love is happy with the truth. Love never gives up and is eternal. Caring supplements love in many ways and means. MRIS balances love and care in a unique manner to offer a wholesome experience and let children blossom to their full potential.

### BRIEF CREATIVE RATIONALE FOR FOUR HOUSE LOGOS

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Manav Rachna is a leading and hallowed name in education spanning schools to professional institutions. At Manav Rachna International School (MRIS), it made sense to have four houses representing the students. This was to foster competition, infuse creativity and innovation, recognize diversity and raise the bar in all areas.

Thus, the four houses were curiously and innovatively named Yellow Tigers, Blue Panthers, Green Leopards and Red Jaguars. The names have been chosen after careful deliberation.

These are a triumph of strategy and design, working together to ensure success. While the identities lend the houses an interesting face, they differentiate them as well, and catapult them to a higher league. The names and mnemonics embrace the best and most recognised characteristics of studentship, education and future realities. They capture the spirit and aspirations of the new and emerging ideas too.

The look and feel extends beyond the classrooms into the grounds and the whole atmosphere. Overall, the idea is to take MRIS and the four houses to new horizons and the new mnemonics and identities achieve them with ease.

### Creating tomorrow's Innovators

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A Dynamic and Exciting Robotics Education, from MRIS in a tie-up with the best School in the world for Robotics Education, Carnegie Mellon University. A great opportunity to use state-of-the-art curricula in Robotics as a platform to teach Computer Science, Technology, Engineering and Math (CS-STEM) to children at the junior, middle and high school levels.



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## Manav Rachna International School (Admission Brochure 2011-12) Brought to you by MRIS

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Carnegie Mellon University, MRIS' associate is the only American top 25 university founded in the 20th century, and an internationally recognized institution with a distinctive mix of world-class and best-ranked educational and research programmes in computer science, robotics, engineering, entertainment technology, business, public policy and fine arts. The international university has students from over 100 countries, with main campuses in Pittsburgh, Pennsylvania and Silicon Valley and other campuses / joint collaborations in Qatar, Portugal, Greece, Korea, Japan, India, Singapore, Mexico and Argentina.

MRIS follows a structured approach. We start with the early years where we teach through lego kits and move on to the primary and secondary classes. There the instructions are based on modules that consist of programming, multisensor robotics control, building relationships, managing projects and designing. To accomplish this, we will create a lego world and an iCarnegie lab.

## Presented via iCarnegie

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iCarnegie was founded in 1998 as a wholly owned educational subsidiary of Carnegie Mellon University. iCarnegie's mission is to develop and deliver high quality scalable educational programs around the globe that are practical and that help build capacity regionally and nationally. No wonder, the programmes at MRIS include a unique approach to education that combines foundational knowledge, communications (soft and language skills) and Project experiences and have been delivered in more than 20 countries, across Europe, North and Latin America, Asia and Australia.

## With C-STEM

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This project at MRIS intends to help students accomplish just that: to grow the intellectual capital that a country needs to compete globally by exposing students to proven educational technologies to teach computers Science, Technology, Engineering and Math (CS-STEM) .

## Not to mention, Robotics Education

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Of the billions of computer processors manufactured around the world, less than 3% become the brains of new PCs, Macs, and UNIX workstations. The other ninety seven percent go into embedded systems. These processors control every modern electronic device, from toys to traffic lights to televisions to



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nuclear power plants. These processors help run factories, control automotive systems, and enable the worldwide flow of information, products, and people. Experts say that in 2010, 90% of the overall programme code developed around the globe is for embedded computing systems. Educational robotics at MRIS provides an opportunity to train students on how embedded systems work, how to design, control and implement them.

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## Robotics offers an exciting way to learn

Robotics at MRIS offers an exciting and premier context for teaching and integrating Computing, Sciences, Technology, Engineering, and Mathematics (CS-STEM) concepts available to education today. It has evolved as a transformational technology found everywhere, a critical enabler in all industry sectors: energy, agriculture, manufacturing, health care, service, construction, education, and defense. This project ensures that students learn the engineering design process, and mathematical and algorithmic thinking that positions the country for future economic success.

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## Using materials developed at Carnegie Mellon

The project at MRIS selects parts of the best materials that Carnegie Mellon has developed and interprets them. In addition, the project uses in-depth qualitative methods to evaluate the ways in which Carnegie Mellon materials and web-tools are educative for students, also feeding these results into a unit refinement process.

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## A tried, tested approach

Carnegie educational principles are founded on those of its parent, Carnegie Mellon University, emphasizing practical, problem solving and an interdisciplinary, learn-by-doing methodology. The educational approach at MRIS relies heavily on creating an engaging student and instructor experience through courses, assignments and projects, a continuous development mechanism for instructors and the implementation of principles and practices to ensure effective learning through rigorous course design, course evaluations and reflection.



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## Manav Rachna International School (Admission Brochure 2011-12)

### Unique three tier model

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A unique three tier model throughout the programmes is used that includes

- 1) A foundational element, where core concepts and knowledge are taught.
- 2) A soft-skills element where teamwork and communications skills are emphasized and explored and practiced.
- 3) A project based experience where application of the first two tiers is conducted on a real live project.

### 21st century teaching methodology

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iCarnegie uses a blended learning approach. Programmes are delivered by an in-class instructor, trained by iCarnegie and the Robotics Academy. Student materials are presented in written form and through a web-based learning management system that supports the workflow needs of students. Students have access to course information, course content and related discussion forums. In addition, students can take assessments and view instructor feedback, supporting their efforts to improve as the course progresses.

### Enhanced instructional quality

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Students learn best when they have high quality instruction. To maintain quality, iCarnegie has developed multiple mechanisms that help insure that the level of instruction provided can be monitored, adjusted and improved over time.

### Curriculum that improves Math outcomes

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Several studies have found that mathematics can serve as a thinking tool for making conceptual analysis of complex scientific situations more approachable for students. The curriculum begins at the 3rd and 5th grade level, beginning with pre-algebra concepts and introduces students to engineering. At the 6th through 8th grade level, robotics and computer science provide context for students and develop algebraic reasoning -- which is a critical instructional topic for middle-school age children. This is also the time that children are developing their own identities for (or often against) science and engineering careers. At the 9th through 10th grade level the academic focus is on physics, advance computer



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science, and engineering projects. This methodology includes interventions aimed at increasing interest in CS-STEM careers by providing the appropriate mathematics at that level allowing students not to just dream about a CS-STEM career, but also to prepare for one.

CARNEGIE MELLON ROBOTICS CURRICULUM CONTINUUM

## Curricular approach

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A curricular approach (outlined below) that blends the academic mathematics, science, engineering and technology concepts with the development of the necessary skills set for today's workforce. Students master the concepts at one level and build on these concepts at each proceeding level. Academic concepts are introduced using real world contexts/scenarios in ways that the students understand and find engaging.

## Robotic Competitions

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As part of the programme, country wide competitions of student teams are held. These allow the students to work year round to apply what they had learned in the classroom on producing robots that compete with one another on completing specific pre-defined tasks. Students work in teams, building relationships, finding pride, understanding responsibility, managing projects, designing and implementing solutions all along the way. The Robotic-STEM competitions are structured around specific themes where solutions are developed to target social, economical or environmental problems in the country.

## Robotics Camp

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For those who are unable to participate in regular classes throughout the year, there is a short intensive summer programme called Robo-Camp that provides kids of all ages with a chance to participate in similar activities. These summer camps provide ways to engage, energize and capture the motivation of students so that they become familiar and interested in technology and the sciences. Camps provide knowledge and structured learning, project experience in design and implementation of robotic systems and teamwork, collaborative experiences with people from all over the country.



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## Continuous programme evaluation

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At the end of the assessment, students understand better what and how to integrate the curriculums with those currently in existence, into a cohesive programme including the various courses, course sequence and methods of teaching that best suits the intended audience, their skills and abilities and the existing teaching infrastructure.

Programme evaluation is a continuous process and, on-going assessment mechanisms are created to evaluate the programme/courses delivered and adjust the curriculums presented, the teaching techniques or the delivery pace, accordingly.