

Achievements of the School of Architecture, Science & Technology !!!

The **School of Architecture, Science and Technology (AST)** was established in 1989 to provide innovative and high quality cost effective education in **Architecture, Science and Technology** disciplines relevant to present needs of Society and Learners with better academic quality and student support services.

From the beginning, this School implemented following various learner centric innovative concepts and adopted best practices time to time for better quality of teaching-learning and better access with cost effectiveness.

Achievements, Innovative Concepts and Best Practices:

- 1. Home-Kit:** Diploma in Applied Electronics was the first programme offered by this School in 1992 for the working persons in the various engineering industries. This home-kit was designed and developed by this School with the help of one of the leading manufactures Siemens Ltd at Nashik. This Home-kit was developed to conduct about 40 experiments on the courses such as Analog and Digital Electronics. The University distributed these home-kits to our recognized study centres, so that students can perform experiments based on the curriculum of this programme. This home-kit was one of the innovative concept and very much popular among the students due to its simple design and user-friendliness.
- 2. Audio-Vision:** This innovative interactive concept was developed and implemented by this School during 1994-95 in the Diploma in General Electronics Programme. Audio lectures in the voice of subject experts was recorded and provided along with the Self-instructional Print material to the students. It was expected that, student should read the book and listen the audio of the experts simultaneously. This concept was developed to build teacher interaction in the Self-instructional Print material to provide classroom experience to the students. This School developed audio-vision for many courses like Chemistry, Digital Electronics etc to provide best learning support to the students.
- 3. Learn and Earn Scheme:** This School offered Learn and Earn Scheme first time in the University for Engineering Diploma and Diploma in Essential Skill Programmes at few study centers. Students enrolled under "Learn and Earn" scheme are placed various industries or business units as an '**Apprentice**' under the 'Apprenticeship Act 1961' to acquire and master various skills in 'real' work environment. Their fees and all expenses required for this education are paid by the respective industries or business units and students do receive monthly stipend during period of education. The Government of Maharashtra has approved this '**Learn and Earn**' scheme under the 'Apprenticeship Act 1961'.
- 4. Special Study Center:** This School extended education services by establishing study center at Naval Dockyard, Mumbai for Diploma in Industrial Electronics and Diploma in Mechanical Engineering Programmes. Naval Dockyard is National Service Providing Authority of Government of India. By these special efforts of the School, employees of the Naval Dockyard could upgrade their professional education qualification in the field of electronics and mechanical engineering.

5. **Industry based Study Center:** This School implemented innovative concept of Industry based Study Center at few industries UK Metals at Nashik, Kalyan, etc for Engineering Diploma Programmes. Counseling for theory and practical courses was conducted for the employees of the industries at their workplace itself. In this way, employees of the industries are upgraded with skills and knowledge.
6. **MSBTE Equivalence:** All Engineering Diploma programmes (Except V55: Diploma in Electrical Engineering) offered by this School has Maharashtra State Board of Technical Education (MSBTE) equivalence till 2015.
7. **CoA Approval:** This was the **first Open University and the School** who offered Diploma, B. Arch., M. Arch. Programmes from Architecture discipline in ODL Mode from 2005 after due approval from Council of Architecture, New Delhi. These programmes and recognised study centre/institutes/ colleges was duly approved by the CoA New Delhi till 2016. **Registration number for professional practice** was allotted by CoA to all B.Arch. pass out students of this School.
8. **DGS Approval:** This School offered full-time residential B. Tech. in Marine Engineering programme designed and developed as per Directorate of General Shipping (DGS) Norms till 2016. This was one of the most popular programme of this University. This programme was offered only at our recognized study centers approved by the DG Shipping. Navigation experience was given to the students on the simulator placed in the ship.
9. **Online Aptitude Test:** This School designed and conducted **Online Aptitude Test** required for admission to B.Arch. Programme of this School as per all other admission criteria specified by the CoA.
10. **Online Qualifying Test:** This School on MOODLE platform designed and conducted Online Qualifying Test required for admission to B. Tech. in Marine Engineering programme.
11. **Online Admission System:** First time in University, this School offered online admission system and services for seamless management of B. Tech. in Electronics Engineering and B Tech in Mechanical Engineering programmes students' admission and examination data. Offering online services, School empowered the recognized study centers and students to get hassle free experience of entire admission and exam Hall Ticket generation procedure. This School truly integrated technology in implementation of these programmes to provide support services to all the stake holders till 2010.
12. **Discussion Forum:** This School offered Online Discussion Forum on Moodle platform to resolve admission, examination and academic queries of students as well as study centers. This forum was used for interaction and engagement of the Students in the teaching-learning process of all programmes on offer by this School.
13. **PQP Discussion Forum:** This School offered Online Past Question Paper (PQP) Discussion Forum on Moodle platform for all programmes to guide students about what is expected in the question and how to write correct answers in the end examination. This forum helped students to achieve success in the end examination.
14. **Online Counseling:** This School offered Online Counseling for all programmes on offer, using Online Discussion Forum for synchronous and Asynchronous modes. Online Counselors was appointed to provide subject wise academic support to resolve queries of the students and to monitor their progress through various activities. Online counseling provides threaded discussion with properly organized views from multiple students about a single topic of discussion. This was like repository of academic discussion by the students and the counselor.

- 15. Online Self-Test Center:** This School developed Online Self-Test Center based on Adaptive Algorithm for full randomization. Adaptive algorithm supports low achiever students, while simultaneously challenges high achiever students.
- 16. Virtual Classroom Modules (VCMs):** For various programmes, this School developed easy to use Learning Resource in the form of interactive supporting learning materials like 'Virtual Classroom Module (VCM)'. VCMs means 'well prepared high quality multimedia Audio-Visual Lectures from the master trainer, where Audio is synced with animation on slides. Concept was these VCMs have to be followed by discussion and/or tutorial along with real Counselor, during face to face counseling sessions at each study centre for better understanding of difficult concepts by the students. These VCMs can be used at anytime, anywhere as they may be distributed through CD and Internet. This School developed about 200+ VCMs for various courses. We are proud to share that, VCMs developed by our faculty Dr Chetana Kamlaskar for Basic Electronics-Theory course was **short listed for final selection** for 'Excellence in Distance Education Awards under Materials Category A' by **COL**, during July 2004.
- 17. SCORM Modules:** For various courses for better eLearning interoperability, this School converted PPTs, audio-visual lectures as well as developed Shareable Content Object Reference Model (SCROM) compliant Modules. These SCROM modules are played well with other eLearning software without any trouble.
- 18. Free online ELearning course:** 'SCORM modules with rich multimedia, animations, simulations and synchronized audio lecture' on the full syllabus of the 'Engineering Drawing (ED)' – total 40 modules were developed during academic year 2011-2012. 'Engineering Drawing (ED) is a basic engineering subject at first year 01 of almost all engineering disciplines. This was launched as a free online ELearning course for all aspiring diploma or degree students.
- 19. Mobile Lectures (MLs):** This School always experimented with new easy to use learning technologies to reach to the students. Since smart phones are in the hand of the students, for various courses, this School developed easy to use HTML5 based Audio-Visual Lectures as 'Mobile Lectures (MLs)'. These HTML5 lectures are Mobile ready with Responsive Design along with integrated Self-Tests. These lectures are downloadable and run on the Mobile. About 100+ Mobile Lectures are developed by this School.
- 20. Online Counselling:** During Corona Pandemic in April 2021, academic coordinators of this School conducted online counselling for all the courses of B.Sc. [PCM] and M.Sc. [Environmental Science] programmes on Zoom platform for all enrolled students across all study centres of Maharashtra.
- 21. Audio Lectures:** Academic coordinators of this School developed 75 Audio Lectures for B.Sc. [PCM] and M.Sc. [Environmental Science] programmes on various courses during 2020 and made available on its website.
- 22. Audio-Video Lectures:** Academic coordinators of this School developed 20 Audio-Video Lectures for B.Sc. [PCM] and M.Sc. [Environmental Science] programmes on various courses during 2020 and made available on its website.
- 23. YouTube Channels:** This School has its own following YouTube Channels to provide additional learning support to the students. These videos are created on general as well as specific topics related to course content.
1. 'Director, AST School, YCMOU Nashik ', created and uploaded **48 videos** on Moodle learning, research methodology, etc. and
 2. Dr. Sunanda More, Director, AST School YCMOU Nashik created and uploaded **34 videos** on various Science subjects.

- 24. Study Centers/ Learner Support Centers:** Teaching-learning for theory, practical conduction and project work, etc for the learners is held as per the UGC norms in face-to-face mode by the qualified and experienced counsellors working at the recognized Study Centers/ Learner Support Centers; which are mainly Senior Science Colleges for the programmes from Science Discipline. Periodical Evaluation and Grading of the Study Centers/ Learner Support Centers is done by this School to ensure academic quality to impart teaching-learning to the learners by them.
- 25. SLM Development:** This School developed Self-Learning Material (SLM) in Self-Instructional format from renowned expert writers and editors for all Diploma, UG and PG Science Programmes. These books are made available on the University website for free download.
- 26. Ph.D. Programmes:** As per UGC Regulation and approval, this School is offering Ph.D. in Chemistry, Environmental Science and Geology subjects.
- 27. New and Revised Programmes Launched in 2021:** This School, launched following 08 academic programmes in A.Y. 2021-22
- 1) V130: M.Sc. [Mathematics] {Revised}
 - 2) V131: M.Sc. [Physics]
 - 3) V132: M.Sc. [Chemistry]
 - 4) V133: M.Sc.[Zoology]
 - 5) V134: M.Sc. [Botany]
 - 6) V136: M.Sc. [Environmental Science] {Revised}
 - 7) V135: Diploma in Environmental Science
 - 8) V137: Diploma in Statistics
- 28. UGC Approval:** All B.Sc. and M.Sc. programmes of this School are approved by the University Grants Commission (UGC) New Delhi
- 29. National Science Day 2020:** This School celebrated Science day on 28th Feb 2020 by organizing lectures by experts to create importance of Science in our life, organising science quiz, presentation of documentary on Women and inauguration of Science Laboratory.
- 30. National Science Week 2021:** This School celebrated Science Week during 22-28th Feb 2021 by organizing lectures on useful topics by renowned experts in Maharashtra, organized online science quiz to all, presentation on Future of STI: Impacts on Education, Skills and work, organized preview on Biography of Ramanujan, the great Indian Mathematician. Faculty and staff of the University, students, study centers and citizens participated in online activities conducted by this School.