# MAPÚA INSTITUTE OF TECHNOLOGY:

# Farther... greater after 91 years

Through the years, Mapúa Institute of Technology has been in the forefront of technological innovation and advancement. Celebrating 91 years of world-L class education offered not only to Filipino but also to international students, Mapúa continues to live up to its leading role in engineering, architecture and technology education.

The Institute was founded by Tomas Mapúa, the first Filipino registered architect, in January 1925. He held that technology is the most effective means of smoothly facilitating the country's economic and social survival He believed with intense faith in the youth who belong to the middle and working class to whom he dedicated and opened the Institute.

With a change in ownership at the turn of the century, the Institute, now under the helm of Ambassador Alfonso T. Yuchengco, enunciated a vision of being a global center of excellence. In the last 15 years, it has moved aggressively towards the attainment of this vision with its trailblazing move towards international accreditation and its pioneering adoption of outcomes-based education.

After 91 years, Mapúa remains true to the visions of these pillars of the Institute as it celebrates its founding anniversary with activities lined up for the whole week from January 25 to 30.

#### 91 years of excellence

"Motivated to go 'farther and greater,' Mapúa prepares itself for the challenges of internationalization and innovation. Hence, Mapúa continues to strengthen its globally oriented engineering and technology programs," School of Multimedia and Visual Arts dean Architect Arnold P. Cinco said. SMVA is this year's organizing committee for the Foundation Week with the theme "Farther...Greater."

The celebration will kick off with the annual Parade of Excellence. The weeklong celebration will also include the fourth Outcomes-Based Education (OBE) Conference, which is slated on the third day of the foundation week. The conference will serve as another platform for Mapúa faculty and students to further enhance the implementation of OBE in the Institute. Mapúa, being the first school in the Philippines to fully opt for OBE, has enjoyed significant progress in student growth and board exam performance. The ceremony for the Cardinal Excellence Awards (TCEA), given to individuals who brought honor and pride to the Institute through their achievements in the morning of January 26.

The student body also has activities in store for the most momentous week in Mapúa.

Central Student Council President John Alfred Silisilon III, a fourth year student taking up Electronics Engineering, said that activities will showcase students' talent, class, and beauty with Mr. and Ms. Cardinals. Technical exhibits will be showcased in North and South Circles for the Intramuros Campus, and in the lobby for the Makati campus, for the whole week.

#### Highlighting current issues

Mapúa will also highlight current issues with significant impact on the society in two major lectures as part of the lineup of the activities for the Foundation Week. The first one will be "ASEAN Integration and Its Implications on the Engineering and Technology Professions;" the second one, which is part of the Hernando P. Limsin Lecture Series, will be on "Responding to Global Warming and Climate Change."

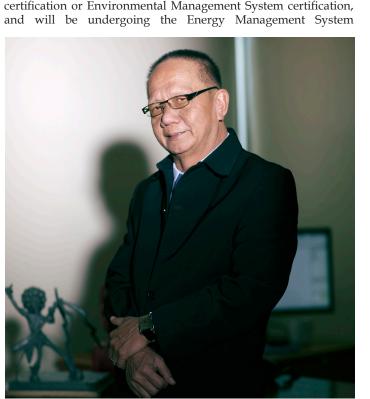
Ambassador Claro S. Cristobal, director-general of the Foreign Service Institute (FSI) will grace the ASEAN Integration seminar as one of the key speakers. Along with him are Dr. Henelito A. Sevilla Jr. of the University of the Philippines and Dr. George N. Manzano of the University of Asia and the Pacific. Meanwhile, the climate change seminar will be conducted by two Mapúan alumni who have deep involvement in responding to global warming issues-Engr. Laurentino Punsalan, Founding President and current chairman of the Philippine Green Building Initiative, Arch. Emelito Punsalan, Vice President for Technical of the Philippine Green Building Initiative and Engr. Mario Marasigan of the Department of Energy.

#### The ASEAN integration and Mapúan education

Happening on January 25, the second day of the weeklong 91st foundation anniversary, the ASEAN integration seminar on engineering and technology professions aims to prepare Mapúans for the impending ASEAN integration.

The seminar will bring to the fore the importance of innovation in science, engineering and technology education for national development and global competency. The multi-disciplinary





MAPÚA INSTITUTE OF TECHNOLOGY

With Mapúa's global outlook, there should be no limit to what Mapúans should be able to achieve professionally anywhere in the world.

approach of the seminar's discussions will open horizons forecasting and enlightening Mapúans on crucial ASEAN Integration concerns vis-à-vis economics, education, and foreign relations," said Engr. Rosette Eira E. Camus, dean of Admissions and International Programs, further, with ASEAN integration just around the corner, Mapúa will "even more strengthen its resolve to provide education that is global in standards.'

Engr. Camus explained that the ASEAN integration will greatly benefit the students in real-world contexts of employers looking for technically skilled workers who are also leadershiporiented, resilient, competitive, and adaptive.

We prepare our students to be technically skilled through our strong curriculum, and we have various activities such as career development seminars, to further improve their communication and personal skills," Camus said.

With the ASEAN integration, there will be a freer flow of rices among different professions, wherein professionals can practice in other ASEAN countries after seeking certification. The Philippine Technological Council (PTC) represents the Philippines to the ASEAN Federation of Engineering Organization (AFEO) that established the ASEAN Engineer Registry (AER). AER-listed engineers are recognized in the region. Mapúa's Civil, Electrical, Electronics, and Industrial Engineering programs are accredited by the PTC's accreditation arm: PTC-ACBET.

As final note, Arch. Cinco said that "We can't avoid globalization. We have to be prepared, take advantage of the opportunities and stay relevant."

#### Mapúa's climate change efforts

In addition to the ASEAN integration seminar, Mapúa has organized a seminar on global warming and climate change, which will happen on January 28, the fifth day of the

foundation week. "Nations and governments have responded to the alarming consequences of global warming with various efforts, even creating agencies and other units to continuously find a solution to the problem," Arch. Cinco said. "Various possible responses to this issue include emissions reduction, building resilient systems, and employing future climate engineering—an area that calls for the creative response from engineering and technological sectors. That is where Mapúa comes in."

For its part, Mapúa is in the process of undergoing ISO 14001 certification or Environmental Management System certification, certification to complement the former. Mapúa also implemented measures for carbon footprint reduction by decreasing energy and water consumption by several percentage points yearly for a number of years in both Intramuros and Makati campuses. The Institute also did a full re-lamping of both campuses using T5 fluorescent lamps, and is currently in the implementation process of shifting to inverter type air-conditioning units. Mapúa also promotes and practices waste segregation and recycling.

#### Most important step – awareness

But according to Dr. Vea, the most important step is spreading awareness of the issue through instruction and research.

'As an educational institution, we have many opportunities to get the community aware through instruction. We also have ongoing research on carbon capture and renewable energy, in line with our research theme of sustainability," explained Dr. Vea.

Echoing Dr. Vea's statements, Environmental and Sanitary Engineering program chair Engr. Wyndell Almenor said that instruction of environmental principles has always been a practice of Mapúa as an academic and technological institution with the goal of producing "frontliners" for environmental protection and preservation.

#### Producing 'environmental soldiers'

'Year after year, we produce 'environmental soldiers' who first and foremost cares for the protection and preservation of the environment. In the industry, they are the pollution control officers, consultants who design treatment facilities and environmental impact studies," explained Engr. Almenor. He added that this is achieved through sophisticated laboratories, and industry practitioner faculty members.

Almenor further stressed that increasing efforts to reduce, reuse, and recycle; and developing a deeper collaboration with students and faculty members, and industry professionals should be done to come up with viable green solutions to be implemented

#### Integrating practices in coursework

Another Mapúan professor who advocates green and sustainable solutions is Architect Albert Zambrano from the School of Architecture, Industrial Design, and the Built Environment. Arch. Zambrano is known for his vertical sidewalk-medium rise building project.

"Green architecture at the moment is mostly implemented with projects for the upper 10% income bracket," Arch. Zambrano said. "It will have an even greater impact if green architecture is applied for the other 90% lower-income bracket. I am creating green designs together with students – green designs that can be applied on a mass scale, [that will have] a bigger impact on the environment and society."

#### Continuing tradition of excellence

With the triumphs and accomplishments that the Institute garnered in more than nine decades, it still continues to better itself, and will do so in more years to come.

Mapúa, through its board topnotchers, prominent engineers and technological practitioners in the field, internationalization efforts, and numerous researches and innovation, has been continuously upholding the Institute's tradition of excellence and legacy of greatness.

For CSC president Silisilon, Mapúa is evidently and continuously bolstering its claim as a globally competitive institution through its numerous accolades and recognitions.

'Mapúans are being recognized globally, evidence that we are moving up. Mapúans have greater chances to land good jobs in the industry. We are transitioning, and we are preparing ourselves to what the future can bring," Silisilon concluded.

(L-R) Dr. Reynaldo B. Vea, President and Chief Executive Officer, and Arch. Arnold P. Cinco, Dean of School of Multimedia and Visual Arts and Chair of the 91st Foundation Week organizing committee

Digital . Research-driven . Outcomes-based . International Domain

# Mapúa, MCL, MHSS gear up for Senior High School in SY 2016

Mapúa Institute of Technology, Malayan Colleges Laguna (MCL), and Malayan High School of Science (MHSS) are set to open their doors to the first batch of senior high school students come June 2016.

Mapúa and MCL will offer all the four strands of the Academic Track - Science, Technology, Engineering, and Mathematics Strand (STEM); Accountancy and Business Management Strand (ABM); Humanities and Social Sciences Strand (HUMSS); and General Academic Strand (GAS). Additionally, MCL will offer technical-vocational-livelihood tracks. MHSS, on the other hand, will offer three strands of the Academic Track: STEM, ABM, and HUMSS.

#### Foot-in-the-door advantage at Mapúa

According to Mapúa President and Chief Executive Officer Dr. Reynaldo B. Vea, the same high-quality education that Mapúa is known for will be employed, ensuring world-class education and "foot-in-the-door advantage" in the competitive admissions process into the colleges of Mapúa. They may choose to pursue any of Mapúa's academic degree programs, which are harmonized with the four SHS academic strands.

These programs include but are not limited to the eight programs accredited by the Engineering Accreditation of ABET (http://www.abet.org) which are Chemical Engineering, Civil Engineering, Computer Engineering, Electrical Engineering, Electronics Engineering, Environmental and Sanitary Engineering, Industrial Engineering, Mechanical Engineering, and the two programs accredited by the Computing Accreditation of ABET namely, Computer Science, and Information Technology.

Aside from this, Dr. Vea added that SHS students will enjoy the use of top-notch equipment and laboratories, and the best teachers during the duration of their stay in Mapúa. Mapúa continuously links up with industry partners to develop more materials and equipment for instruction that support the Institute in pursuing world-class education and producing globally competitive alumni.

According to Dean of Admissions and International Programs Engr. Rosette Eira E. Camus, with the implementation of SHS, Mapúa will continue to uphold its tradition of excellence and forward-looking approach to development. One of the main offerings of Mapúa Senior High is that it will give senior high school students, particularly Grade 12 students, an opportunity to Microsoft Office Productivity tools, internet of ccelerate their progress through college through the Advanced things, part of MHSS curriculum

#### Mapúa advanced placement opportunities

the AP courses, Calculus 1 (AP01) and Calculus 2 (AP02). "Should the students decide to pursue their tertiary level in the Institute, the AP courses they have taken during Grade 12 will be credited provided that they obtain a grade requirement of at least 90% at Internet of Things and database programming the end of each course," explained Engr. Camus.

#### Voc-Tech and Academic Tracks at MCL Senior High School

MCL has a different implementation of Senior High School. "We offer SHS tracks that are designed not only to prepare individuals for tertiary education, but also to equip them for work immediately after high school. It is for this reason that we see the value of offering tertiary and vocational programs needed by the industry, not just locally, but globally," shared MCL Vice President for Academic Affairs, Engr. Dennis H. Tablante.

Aside from the academic track of the Senior High School curriculum, MCL will offer the following strands under the technical-vocational-livelihood track: Information and Communications Technology (ICT) with specializations in and premier technological school in the Animation and Computer Programming, and Contact Centre Services; Industrial Arts (IA) with specializations in Consumer Electronics Servicing, and Shielded Metal Arc Welding; and Home the wave of digitalization in the  $Economics \, (HE) \, with \, specialization \, in \, Bread \, and \, Pastry \, Production,$ Cookery, Food and Beverage Services and Housekeeping.





(L-R) Engr. Dennis H. Tablante, MCL Vice President for Academic Affairs; Engr. Dodjie S. Maestrecampo, MCL Executive Vice President and Chief Operating Officer

With its smart campus, highly qualified mentors, learner-centered curricula, and industry-preferred programs, MCL Senior High School assures its incoming students of quality of education that will lead to successful career paths in the future.



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"We aim for senior high school to be a laboratory for life which means that by the time the students finish senior high school, they are all set for the world," shared Mr. John Vincent Salayo, MCL Senior High School Principal, adding that the preparations for the senior high school program is challenging on its own and yet an "exciting time for Philippine education and for MCL."

The principal further said that MCL is all set in terms of facilities, classrooms, and teachers. "It doesn't feel like starting from scratch," said Mr. Salayo. "It feels great that right now, we are preparing the soil and also preparing the seeds to be planted. In a few years, we're excited to see the fruits of all these."

"Learning Microsoft Office is definitely important. You will be surprised that many of us cannot fully utilize the functions in Microsoft Office. Yes, we know the basics but many are not Grade 12 students enrolled in STEM are eligible to enroll in familiar with the advanced features. And that's what we want for our senior high school students," said Brian Co. Chief Information

One of the program outcomes of the school is "appreciation of the most important technologies of the day," hence MHSS is set to offer a course in Internet of Things (IoT) in Grade 12 for the STEM

Those in the ABM and HUMMS strands will take up database programming during Grade 12.

# Mapúa at 91: A glimpse into the future

Mapúa Institute of Technology, the biggest country is looking ahead, preparing to surf coming years.

At the heart of Mapúa Institute of Technology is a strong aspiration to provide its students a state-of-the-art, cutting-edge

With this goal in mind, the Institute has embarked on a journey to develop progressive, innovative approaches that champion the use of technology in honing the students' skills. Continuing its efforts to bolster the Institute's world class quality of education, Mapúa has strategized an advancement of its game plan for the challenges and opportunities in the coming years. In this regard, President and Chief Executive Officer Dr. Reynaldo B. Vea coined D.R.O.I.D. which refers to Mapúa becoming a Digital, Research-driven, Outcomes-based, International Domain, summarizing Mapúa's response to globalization and the explosion

#### Groundbreaker in digital advancement

To further pursue its goal to become one of the top universities worldwide, the Institute is gearing up for the online degrees that it plans to offer. The implementation of Clicker technology, wherein nstructors and professors utilize a clicker device during classroom discussions, has been one of the initiatives.

This implementation is in relation to Mapúa's Collaborative Learning for Independent and Competitive Knowledge (CLICK) technology, aimed at encouraging class participation among the

Another initiative of Mapúa is Blackboard Learn, a learning

management system, deployed not only in the Institute, but also in its wholly owned subsidiaries Malayan Colleges Laguna (MCL) and Malayan High School of Science (MHSS).

Blackboard Learn is a virtual learning environment and course management system that catalyzes student learning, facilitating over-all discussions, thus allowing both the students and faculty members to communicate more clearly and systematically. Through Blackboard Learn, students and teachers have an easy and effective way to upload and access course materials, and

track, report, and assess student learning and achievements It also allows users to create customized communities, library integration, and a centralized content repository with granular control over content objects.

According to Center for Teaching and Learning head Professor Mary Christine A. Tomas, the new technology gave way to the standardization of LMS across all programs and departments of the Institute and its subsidiaries.

"For years, we have been using several free LMS, which we cannot maximize in terms of reports needed by the different schools or programs," Prof. Tomas said. "Blackboard Learn allows students and faculty members to be more functional, and more collaborative because of this 'faculty-friendly' LMS platform." Prof. Tomas added that with Blackboard Learn, students and faculty members can tailor their Blackboard page according to their class room needs. Additionally, it includes a tool allowing teachers and professors to detect plagiarism, distribute class reading, and conduct online conferences for distance learning.

#### Internet of Things

The Institute also actively engages in research, design, innovation in the field of Internet of Things (IoT)—the network of smart things via internet, enabling the objects to communicate with one another for the purpose of performing certain tasks.

School of Electrical, Electronics and Computer and Engineering Dean Alejandro H. Ballado, Jr. explained that IoT is currently one of the leading technologies worldwide, and it is expected to progressively develop in the coming years.

According to a Business Insider report, there will be 34 billion devices connected to the internet by 2020, up from 10 billion in 2015, and nearly six trillion dollars will be spent on IoT solutions in the next five years. These facts, according to Engr. Ballado, solidifies the importance of Mapúa's engagement in the field of IoT through research, design, development, and deployment, acting as a trailblazer in technology research, to stay relevant in

'Mapúa's efforts in the field of IoT will continuously improve the capacity of the personnel of Mapúa to tackle, solve, and innovate recent and relevant issues in the field of engineering and technology," said Dean Ballado.

Mapúans are employing IoT in their research projects such as the design and development of wireless sensor nodes for



Engr, Alejandro H. Ballado, Jr., Dean of School of Electrical, Electronics and Computer and Engineering

structural health monitoring of bridges, sensor nodes embedded in concrete hollow blocks for fire detection and monitoring is also in the works, along with sensor nodes with a cloud server for rice warehouse environment monitoring, agricultural irrigation system, cargo trucking, and monitoring security.

#### An advocate of research and development

Technology research on the IoT is just the tip of Mapúa's engagement in research and development.

According to International Linkages on Research and Development officer Dr. Delia B. Senoro, Mapúa has made significant accomplishments on its quest to excel in the field. One of the biggest achievement is the establishment of its own research center, housing various state-of-the-art laboratory equipment to



Dr. Delia B. Senoro, International Linkages on Research and Development Officer

Mapúa is also taking pride in one of its ongoing researches—the membrane technology, a separation process commonly used for the creation of process water from groundwater, surface water or

To further research efforts on this technology, Mapúa forged a partnership with the Center for Membrane Technology of Chung Yuan Christian University (CMT-CYCU) for collaborative research, joint publications, shared intellectual property, use of equipment, and exchanges of student and faculty researchers between Mapúa and CMT-CYCU.

### Mapúan researchers

Dr. Jacque Lynn Gabayno, a physics professor who completed her post-doctoral research in CYCU, studied the capacity of magnetic nanomaterials (particularly iron oxide or magnetite) for biomedical applications of detecting and removing blood clot right away even when the person is not in the hospital. Another is Ms. Maria Theresa Artuz, who obtained her Master's Degree in Environmental Engineering in Mapúa. She studied about biosorption of metals (copper, lead, and nickel) from waste water as a scholar at Chia Nan University of Pharmacy and Science (CNU) in Taiwan. Student researcher Irish Suzette Gan, alongside other researchers, is working on a project assessing human error in the aviation industry.

The Institute has also recently established the Geospatial Information and Civil Systems (GICS) laboratory, employing faculty and student researchers. The GICS lab currently houses significant studies on the DOST grant-in-aid project, Mapúa Phil-LiDAR 1 which will help in mapping flood hazards as well as predict the extent of flooding in the provinces of Cavite, Batangas, Rizal, and Quezon or CABARZON. This will greatly facilitate accurate planning and appropriate disaster and risk reduction and response of local government units in the said areas.

#### Sustainability research

According to Dr. Vea, sustainability, as a present-day global



(L-R) Dr. Jacque Lynn Gabayno, faculty member of the Mapúa Department of Physics; Ms. Maria Theresa Artuz, master's degree holder in Environmental Engineering

concern, has been a major theme of the research and development efforts of Mapúa.

"Such a research direction jibes with the desired learning outcome that Mapua graduates should be able to provide solutions to problems that take into account societal, environmental and ethical concerns," he states.



Dr. Jonathan W.L. Salvacion, Director of Directive Research for Innovation and Value Enhancement

## Graduate research in Mapúa

Directive Research for Innovation and Value Enhancement (DRIVE) Director Jonathan W.L. Salvacion said that universities are expected to do research and development work. He added that this will be achieved through organizing the research works of Mapúa's graduate and undergraduate students. Graduate arch, he said, moves towards pragmatic and programi approach leading to long-term programs of application.

'A university is not just about teaching. The modern university, as Mapúa envisions itself, is expected to generate new knowledge, and open new frontiers," Dr. Salvacion said. DRIVE had already started to patent the works of students, one of which is a research on the agricultural application of electronics

engineering. Another electronics engineering graduate student is developing a device for warning drowsy drivers, while another student is studying the use of GPS in any kind of condition without reliance on satellites.

#### Making milestones through education reforms

The implementation of the outcomes-based education (OBE) system in Mapúa and MCL yielded positive results that are evident

in student progress and board and licensure exam performance. Accrediting bodies ABET and PTC-ACBET granted its programs respective accreditation.

"The attainment of desired learning outcomes is the organizing principle of Mapua education" said Dr. Vea. "These learning outcomes are attuned to global and national needs thus making our graduates highly competitive. In conjunction with the outcomes based approach we are putting the learner at the center of it all."

#### Pioneering international linkages

 $Map\'{u}a~is~also~aggressively~forging~international~linkages~with$ different institutions, exposing students to a wider perspective in the world of practice, honing their skills on a more advanced level, which serve as their ticket to success.

Admissions and International Programs Dean Eira E. Camus said that the Institute currently has partnerships with close to more than a hundred institutions for all the programs. Meanwhile, Dr. Senoro said that ILRAD established partnerships in almost 20 countries, the most active of which are Sweden and Taiwan.

"Our participation in these linkages, coupled with our international accreditation is definitely helping us to position Mapúa in the international arena," Engr. Camus said.

Aside from international on-the-job trainings, student/ faculty exchanges, plant visits, and summer programs. Mapúa is also opening more networking opportunities for both the students and faculty members.

## Future Mapúa

Mapúa endeavors to shape a more vivid future for the Institute itself and the students.

In 2018, when the first batch of Grade 12 graduates step out of senior high school, Mapúa will open the doors of a new school in Davao - the Malayan Colleges Mindanao (MCM). According to Dr. Vea, the new institution will employ Mapúa's high quality of education that aims to equip its students with world class knowledge and skills that are appropriate and needed in the global workforce. Like Mapúa, MCM will have access to state-ofthe-art facilities, superb faculty, and an outcomes-based education system, the full-scale implementation of which the Institute pioneered in the Philippines.

The growing competition in the global market also motivates the Institute to scale its efforts up both in the academic and administrative spheres.

"Mapúa is progressively advancing towards its aim to join the ranks of the best schools in the world. We hope to secure this future for Mapua through D.R.O.I.D" concluded Dr. Vea.



Dr. Bonifacio T. Doma, Jr., Executive Vice President for Academic Affairs

# Mapúa Cardinals return to the basketball limelight

Fortunato "Atoy" Co, Cardinals Basketball Team Head Coach

With strong-minded veterans and promising rookies, the Mapúa Cardinals took a huge stride forward and emerged resilient as they finally made it back to the Final Four race in the 91st season of the National Collegiate Athletic Association

The Cardinals came face to face with tough adversaries during the recently concluded NCAA season but still managed to flex their muscles-all because of commitment and teamwork. They have snared the third place with a 12-6 winloss slate, putting an end to their five-year drought. "I'm happy that we were able to make it to the Final Four

and I can attribute that to the cooperation of all the players," Head Coach Atoy Co proudly commented. The mentor also believed that the basketball system the

coaching staffs have been implementing was another factor that led to the team's come-from-behind success, suggesting that it solidifies the Cardinals' play game after game.

#### Powering through adversity

The transformation of the Cardinals from underdogs to Final Four placers was far from easy, though. Aside from contending with tough opponents, the troop also had to endure the absence of veterans CJ Isit, Josan Nimes, and Andretti

Stevens in some of the games due to their injuries. It was then that the rookies unexpectedly took center stage and boldly made their scoring presence felt in each game. Hailed Rookie-MVP Allwell Oraeme served as the team's ticket to a strong comeback as he orchestrated markers, rebounds, and blocks all throughout the season. Rookies Darell Menina, John Nieles, and Justin Serrano also helped the Cardinals power through.

"The absence of the veterans significantly challenged the Cardinals, but I kept pushing them to believe in each other and always play as one because only then will we have chances of winning games," shared Coach Atoy, who used to play for the

Mapúa Cardinals himself back in the day.

The 6-foot-9 Oraeme has even made history since he was named Rookie of the Year, Most Valuable Player, Most Defensive Player, and one of the Mythical Five of the season, further boosting the team's morale. Oraeme was only the third NCAA player who was able to snatch both titles simultaneously.

#### Eyeing a higher spot

Now that the Cardinals achieved their goal of clinching a Final Four berth, the bar has been raised. The basketball diadem seemed elusive for the team as it has failed to book a spot in the Finals since its back-to-back championship title in 1992-1993, and the players are keen on breaking the record.

"We dream of making it to the Finals next season. Of course when you already have entered the Final Four, you always aim for higher. As early as now, I'm already telling the boys that we have to work harder for that," stated the steely Coach Atoy.

While the Mapúan team has enough shooters and a laudable offense play, the players as well as the coaches are well aware that their team defense has to improve. Coach Atoy said that he has been gearing the boys' focus towards a more enhanced defense play in order for the team to pull off an optimum performance during games.

Aside from honing their defense, the reputable coach also intends to develop the players' character. "I believe that an individual character has to improve first, and then everything will start from there. Things will come easy if you have a good

The red-and-gold team will lose seniors Josan Nimes, Mark Brana, Joseph Layug, and Andretti Stevens to graduation this year, but the coach is confident that they will have enough personnel to replace the position. With the return of key players Leo Gabo and Andrew Estrella in addition to the new rookies coming in, Coach Atoy is convinced they will have more firepower inside the lane.

## **MCL@10**

# Celebrating a decade of excellence and virtue

humble beginnings before gaining recognition as a frontrunner in shaping education in CALABARZON. On its 10th year, after many lengthy strides, MCL could not be more proud of its achievements, and could not be more excited for what lies ahead.

#### Preparation for the 2018 Curriculum, expansion to Senior High School

With the constantly changing face of education in the 21st century, MCL expects a sudden shift in the students' dynamic of learning. In response to this, MCL continues to beef up its up-andcoming curriculum, in full confidence that come 2018, it will be ready to face the coming wave of college students - bright-eyed and optimistic for the world-class college education MCL has been

One thing that has set MCL afire with anticipation for 2016 is its offering of Senior High School. With the Philippines' full implementation of the K-12 educational system, there is no denying the need to contribute to the growing demand for higher quality education. In June 2016, MCL will open its gates to its first batch of Senior High School students.

#### Continued legacy of academic excellence

MCL has been known for its excellent passing rates in various licensure and certification examinations for the past years. Four of its programs - Marine Engineering, Marine Transportation, Mechanical Engineering and Electrical Engineering - all achieved a 100% passing rate in their respective licensure and certification exams in 2015. One Marine Transportation graduate, meanwhile, attained a perfect score in the licensure examinations administered by the Maritime Industry Authority (MARINA) in April.

In the same year, the Civil Engineering program achieved a 71% passing rate in the November board exams as against the 42% national passing rate, while several of MCL's established Civil Engineers went on to take the Master Plumber Licensure Exam, yielding an 80% passing rate. The Chemical Engineering program obtained a 75% passing rate in May, while the Accountancy program achieved an 86% passing rate in the Certified Public Accountant Licensure Exam in October as against the 41%

Malayan Colleges Laguna (MCL) has had its own share of national passing rate. MCL also made its mark by rating 90% in the Electronics Technician Licensure Exam in April and 92% in October.

> MCL's overall board and certification examinations passing rate for 2015 is 76% as against the national passing of 49%. Its exemplary performances in these examinations has brought MCL to a leading position among private higher education institutions

#### MCL students making their own marks

Through the past ten years, MCL students have successfully gained recognition from different competitions in the Philippines and abroad, bringing to different places the same culture of excellence, creativity, and innovation, which honed them within

In January, Industrial Engineering (IE) students earned the Championship Award at the Philippine Institute of Industrial Engineers 5th Regional Congress Feasibility Competition with their feasibility study on having a "Vendocine," a vending machine for medicines, at LRT Line 2, Katipunan, Quezon City.

In June, the Philippine Transmarine Carriers, Inc. (PTC) recognized two of MCL's Mapua-PTC College for Maritime Education and Training (CMET) graduates at the PTC Seafarer Awards 2015.

#### Mastering 21st Century Learning

On its 10th founding anniversary, Malayan Colleges Laguna puts much emphasis in mastering 21st Century Learning, which MCL Executive Vice President and Chief Operating Officer Engr. Dodjie Maestrecampo refers to as "a tool for the students to succeed in their studies, work, and in life."

"We define student success through our students' competent outcomes. Our target is for them to be equipped to successfully compete locally and globally. As for employability, they should be the ones most preferred by industries. And those who opt not to work should be successful in their own businesses. These are our metrics for measuring student success," says Engr. Maestrecampo. With the full and strengthened implementation of Outcomes-Based Education (OBE), and a focus on laying the foundations for 21st Century Learning, MCL assures the success of its students and graduates, both from its course offerings and its Senior High School program.



The Mapúa Institute of Technology is committed to advance student welfare, and is ready to face the challenges of the education sector today. It espouses programs that are both innovative and creative, and have a global outlook. These views are also reflected in Mapúa's subsidiary schools, Malayan Colleges Laguna and Malayan High School of Science. We are proud of these institutions for contributing to knowledge generation and societal development in the country.

Ambassador Alfonso T. Yuchengco Mapúa Institute of Technology

On its tenth decade, which started last year and will end in its centennial in 2025, Mapúa fittingly envisions joining the ranks of the best schools in the world. In performing its generic mission of instruction, research and extension, it will strive to raise its implementation of Outcomes-Based Education and digital education to international standards; to heighten its research/development/innovation and advisory/consultancy capabilities to be a credible international player; and to broaden the international dimension of its operations to global norms. Given its long tradition of excellence and its trailblazing successes in the last 15 years,

Reynaldo B. Vea, Ph.D. Berkeley President and Chief Executive Officer Mapúa Institute of Technology Malayan Colleges Laguna Malayan High Scool of Science

Amidst the sea of changes in the education sector, Mapúa Institute of Technology remains relentless in its pursuit of global excellence. A great deal of hardwork and perseverance were involved to turn what used to be mere possibilities into realities—Mapúans are making their mark here and abroad in their respective fields, showing the world the tradition of excellence that sets us apart; our researchers are included in the roster of the top scientists in the country; we have strengthened our partnerships with institutions both in the academe and the industry. In its 91st year, Mapúa stands ready as ever to face the challenges and opportunities of the coming years.



I am pleased to announce that Malayan Colleges Laguna is celebrating its TENTH founding anniversary. I wish to congratulate everyone who has been instrumental in achieving this milestone. Thank you to all the teachers, admins, and staff who have helped in attaining a decade of Excellence and Virtue. As we celebrate our tenth year of achieving the Student Outcomes and Program Educational Objectives, we have chosen the theme of "Mastering 21st Century Learning" to strengthen our lead in educating the next generation learners. This year, MCL will be opening its doors to a new batch of learners: the MCL Senior High School students. MCL will take on this challenge ever-ready as we offer industry-preferred and learner-centered programs utilizing the latest educational technology delivered by highly qualified mentors. Join us as we chart our new path towards the

forefront of the rapidly changing landscape of basic and higher education.

Engr. Dodjie S. Maestrecampo Executive Vice President and Chief Operating Officer Malayan Colleges Laguna

I send greetings and congratulations to Mapúa Institute of Technology, Malayan Colleges Laguna and Malayan High School of Science for the many years of dynamic leadership in the academe and with great confidence I say that these Institutions are continuously doing a magnificent job of providing high quality education. As a proud and grateful member of the Malayan High School of Science, we celebrate the glorious legacy from our mother school (Mapúa), that continues to inspire us, and we share an unbounded optimism in our continued impact and relevance in shaping and enriching the lives of many. Kudos to the many fine people who have made and continue to make these institutions of great

Malayan High School of Science

To see farthest is to be at the highest, and to achieve the greatest is to surround oneself with the finest. I wish to congratulate Mapúa Institute of Technology as it celebrates 91 years of finesse in its scholastic endeavors. Come July 2016, we will once again witness Mapúa's drive in putting itself at the podium as one of the premier institutions in the country as the Institute draws its doors to open on its Senior High School program. While the K-12 system of education provided pathways for a career-oriented education, Mapúa recognizes the need to structure an educational scheme that will further students' abilities in terms of technicality and critical thinking, and creativity in solving problems. In that light, Mapúa envisions itself as a dwelling to cultivate young minds for advanced learning in the fields of engineering, architecture and the arts, and sciences integral with worldclass technical instructions. As Mapúa makes strides as an Institute on its own. it takes pride on committing the same tradition of excellence in its opening of Mapúa Senior High School. That, and a promise of leading aspiring young minds to tread the path of the same superiority embedded on its name

Mapúa Senior High School

Congratulations to Malayan Colleges Laguna on its 10th anniversary! I am humbled by the opportunity to be joining this esteemed institution in time for the opening of its Senior High School this June 2016. The challenge to help improve the state of Philippine education is a tall order. However, with state-of-the-art facilities, driven leadership, and the culture of excellence already in place, we are surely up to the task. Hand-in-hand with Mapúa and the Malayan High School of Science, we continue to mold the youth to become excellent, virtuous and world-class skilled workers, service providers, academicians, technocrats, and entrepreneurs. The theme "MCL@10: Mastering 21st Century Learning" indeed drums up the drive to bring our first batch of Senior High School students through an empowering ride to their bright futures! Long live Mapúa, MHSS

John Vincent D. Salayo Senior High School Principal Malayan Colleges Laguna

# MHSS at 10

# Celebrating a decade of quality and holistic education

A decade has passed since the establishment of Malayan High School of Science, envisioned to be a global center of excellence in secondary education especially in the field of science and technology - a decade which has not passed in vain. The school, continuously investing in providing quality and holistic education to its students, has implemented a curriculum at par with the global standards. Additionally, it has been able to produce wellrounded individuals, not just proficient in the academics but also in co-curricular activities.

With its vision to inculcate in its students the core values of discipline, excellence, commitment, integrity, and responsibility, MHSS aims to produce good Filipino citizens who will become role models and are able to make a difference in the world.

"MHSS has come a long way since its beginning and this year's celebration will focus on honing more Malayans in becoming globally competitive individuals," Malayan administrator Jan Erwin Macam said.

#### Foundation Week

In January 18-22, 2016, the school will be holding its foundation week celebration. The perennial activities include Malayan Wizard, Malayan Idol, Malayan's best Dance Crew, Malayan's Got Talent, and Birit Malayan. Also, for the first time, the school will have its Variety Show where both teachers and students get to show off their talents.

This year showcases the 10 years of MHSS highlighting the different achievements in academic and extra-curricular activities," Macam said.

#### 2015, a year of achievements

The past year has been a year of accolades for the school from academic to extracurricular achievements.

According to the principal, Ms. Jocelyn Antiporda, MHSS students continue to make a difference in the world. "MHSS students earned awards in academic and sports competitions both in the national and international scenes and it has students who graduated with distinction from different universities," she said.

For one, Grade 8 student Audrey Tan won in two math international competitions - one in September and another in November, while two Malayan students won as second runner-up in the sumobot category of the 4th Annual Philippine Robothon held last October.

Malayans are also making it big in the world of sports as the Red Robins ranked as second-runner up in the NCAA basketball championships last October.

#### Edge in robotics technology

MHSS also equips itself and its students with new technologies, evident in Malayan being one of the few schools in the Philippines currently offering Robotics Technology as a subject in its curriculum for Grades 7 to 10. Currently, there are programming and robotics courses in Malayan.

In robotics technology courses, concepts in science, technology, engineering, and mathematics are tackled, even arts and design. The subjects are integrated to make the learning experience for the

"We cannot deny the fact that we are the future. So we need to learn these new things. If we do not prepare our students, they will be lagging behind. We use these technologies to enhance our lives in the future," explained MHSS robotics instructor Diomar Alarde.

#### Internet of Things

Following Mapúa's lead, Malayan High School of Science is on the verge of fully adopting the concept of Internet of Things (IoT), a convergence of smart things connected through the internet enabling them to communicate with one another for the purpose of performing tasks with ease.

With the smart things being able to connect with one another, life for humans would be quite improved plus trouble-free. Internet of Things can help in a wide array of applications: in gadgets, wearable accessories, home entertainment, building systems, transportation systems, office and education tools, and healthcare systems among others. This technology is expected to boom in the coming years, hence the desire of the school to focus on this niche, which it will offer to its Grade 12 STEM students starting

Mapúa will work hand-in-hand with MHSS in exploration of possibilities in the area of Internet of Things to ensure that students and faculty have exposure to the latest trends in this technology.











