

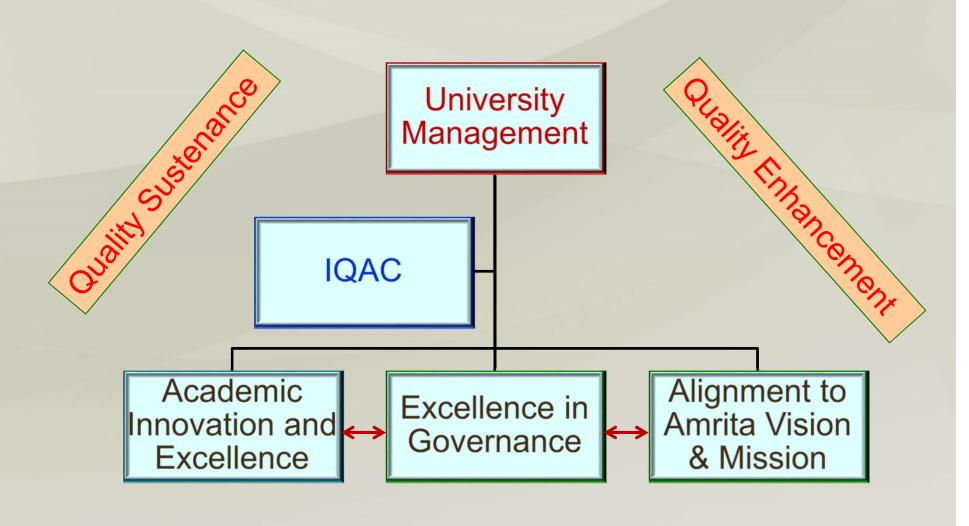
Internal Quality Assurance Cell (IQAC)

AMRITA Coimbatore Campus-level IQAC Presentation to NAAC Peer Review Team by

Dr. Prashant R. Nair, Vice-Chairman, IQAC

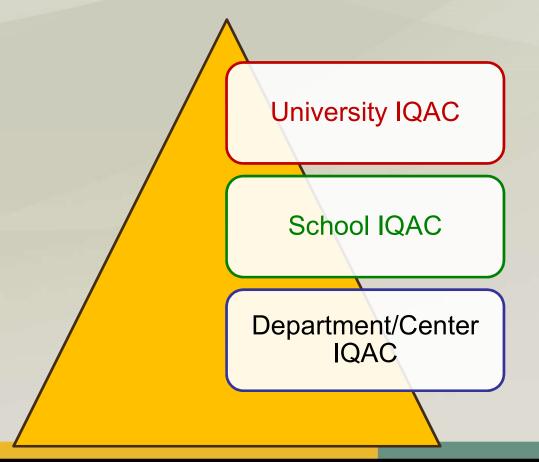


IQAC – A Holistic Approach to Quality



IQAC Structure

- Established in April 2009, post 1st cycle of NAAC accreditation
- 2nd cycle of NAAC Accreditation in 2014



IQAC Focus Areas

Quality Culture

- Establishment and nurturing of IQAC at university, school and department/center levels
- · Orientation, training and guidance
- Generate, share, and disseminate best practices
- Closed-loop feedback system
- Engagement in all aspects of institutional functions

Quality Measurement & Monitoring

- Identification and communication of key metrics and benchmarking indicators
- Systematic data collection and documentation
- · Mechanism for data validation

Quality Analysis & Reporting

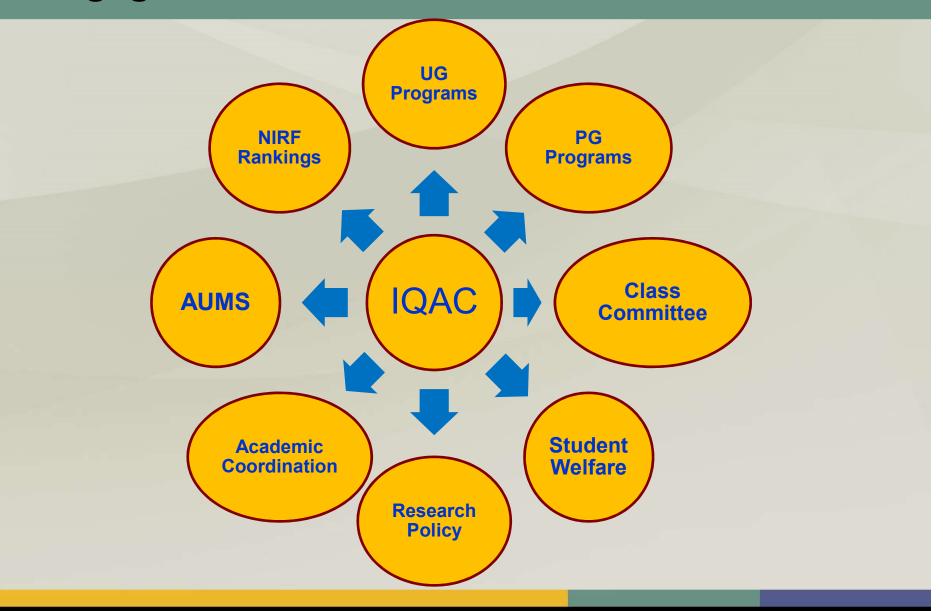
- Generation of recommendation for corrective/improvement actions
- Delivery of reports to regulatory, assessment, and rating agencies
- Key communications to stakeholders

Quality Culture

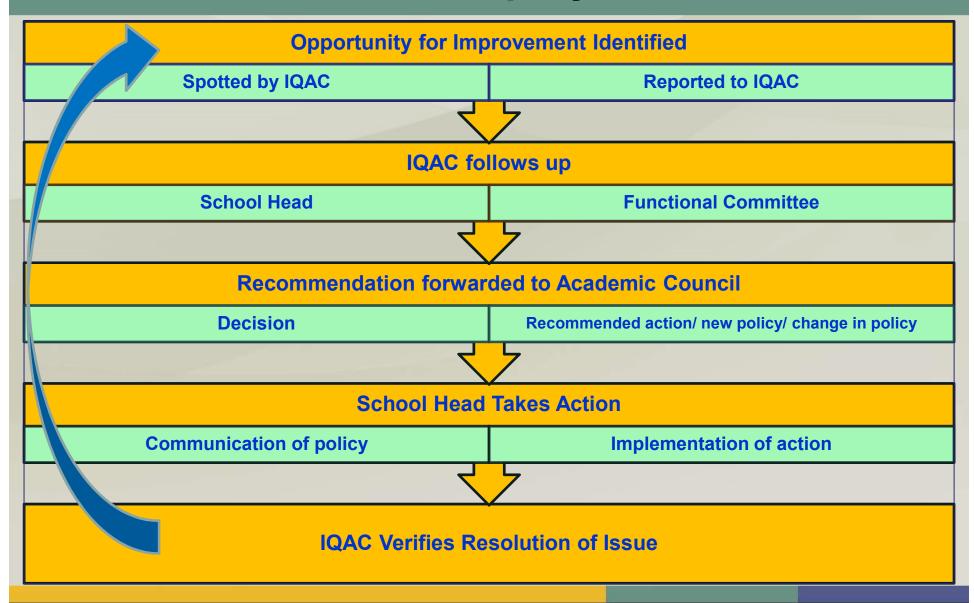
Nurturing quality-consciousness

- School-level IQAC committee as per NAAC guidelines
 - 50+ faculty members in IQAC committee
- Regular meetings to promote quality awareness plus numerous focused meetings in various schools and campuses for:
 - Times Higher Education (THE) & Quacquarelli Symonds (QS) Global Rankings
 - NBA & AASCB Accreditation
 - NIRF & ARIIA Rankings
 - Swachh Campus Rankings
- Pyramid-based decision making
- Quality Events
 - NAAC sponsored workshop & IQAC Presentations in premier conferences
 - Knowledge exchange through workshops and talks at other institutions
 - Visits by various institutions to study IQAC best practices

Engagement of IQAC in Institutional Functions



Closed-loop System



GLIMPSES OF IQAC ACTIVITIES



Internal Quality Assurance Cell (IQAC)



NAAC sponsored National Seminar on

Curriculum Design for Sustainable and Societal Development: A Road Map

Chief Guest

Dr. Sheela Ramachandran,

Former Vice Chancellor, Avinashilingam Institute for Home Science and Higher Education for Women (University), Coimbatore

Presided by

Dr. K. Sankaran,

Registrar,

Amrita University

Date: 12th August, 2016 (Friday),

Time: 9:30 AM

Venue: Muralikrishna Hall, Corporate & Industry Relations

(CIR) Block, Amrita University, Coimbatore campus

Prof. **Prashant R. Nair** Vice-Chair, Amrita University IQAC

Dr. Sriram Devanathan Chair, Amrita University IQAC

Workshops & Orientation Programs

NAAC Sponsored Seminar



- Organized by IQAC on 12 and 13 August, 2016.
- Participation of 120 higher-education experts
- Showcasing best practices of AMRITA such as Live-in-Labs, Innovations in education technologies (A-VIEW) & Amrita Self Reliant Village (Amrita SerVE)

International Summit & Conference Presentations showcasing Best Practices @ AMRITA such as Live-in-Labs & ICPC



Accreditation (WOSA) 2018

Institutions Benefitted by AMRITA IQAC through:

- Workshops, Seminars & Presentations at:
 - Dhirubhai Ambani Institute for ICT, Gandhinagar, Gujarat
 - St Claret's College, Bangalore
 - MOP Vaishnav College for Women (Autonomous), Chennai
 - Tamil Nadu Agricultural University, Coimbatore
 - Bharathiar University, Coimbatore, Tamil Nadu
 - Velammal College of Engineering & Technology, Madurai, Tamil Nadu
 - Sri Shakthi Institute of Engineering &Technology (SSIT), Coimbatore,
 Tamil Nadu
 - Sri Ramakrishna College for Women, Coimbatore, Tamil Nadu
 - SNS College of Engineering, Coimbatore, Tamil Nadu
 - RVS College of Arts and Sciences, Coimbatore, Tamil Nadu
 - Sree Saraswathi Thyagaraja College, Pollachi, Tamil Nadu
 - Mahendra Engineering College, Namakkal, Tamil Nadu

Institutions Benefitted by AMRITA IQAC through:

- AMRITA representation in the IQAC of:
 - Sri Venkateswara University, Tirupati, Andhra Pradesh
 - Ammini College of Engineering, Palakkad, Kerala
 - National College, Trichy, Tamil Nadu
 - Sree Saraswathy Thyagaraja College, Pollachi, Tamil Nadu
 - Kalaignar Karunanidhi Institute of Technology, Coimbatore, Tamil Nadu
 - Sri Shakthi Institute of Engineering &Technology (SSIT), Coimbatore, Tamil
 Nadu
- Visits to AMRITA campuses to study IQAC best practices by:
 - O.P. Jindal Global University, Sonepat, Haryana
 - Sethu Institute of Technology, Virudhanagar, Tamil Nadu
 - M. Kumarasamy College of Engineering, Karur, Tamil Nadu
 - Kalaignar Karunanidhi Institute of Technology, Coimbatore, Tamil Nadu





Quality Enhancement in Engineering Education programme (QEEE) of Ministry of Education and IIT Madras for courses in Mathematics, Computer Science, Civil Engg., Electronics and Electrical Engg

IQAC INTERVENTIONS & BEST PRACTICES

IQAC Best Practice: Outcome-Based Education (OBE)

Objective & Context

- IQAC recommended a goal-centric institutional structure for the end-to-end educational delivery in all programs, and to implement outcomes-based education in its true spirit, in conformance with and in adherence to the global best practices
- In alignment with the institution's development plan aimed at achieving world class educational experience for all stakeholders, resulting in being bracketed in the highest tiers of global ranking, national ranking, and the highest standards of curriculum design & delivery, the adoption of Outcome-Based Education (OBE) assumes great importance

Outcome-Based Education Versus Traditional Education Process

 OBE shifts from measuring input and process to include measuring the output (outcome)
 (Chart terms)

Input Process Subject Outcomes Congram

(Short-term)

Program & Program

Subject Outcomes

- Teaching Staff
- •Curriculum
- ·Labs
- Other Resource

Teaching & Learning

Students at Graduation

Graduates to Fulfill Stakeholders' Satisfaction

- Assessment by exam, test and assignments.
- Assessment of teaching staff, lecture material & flow, results and student 'capabilities' (Short & long-term outcomes), lab interview, exit survey etc.
- More 'thinking' projects, with analysis.
- Feedback from industry, alumni and other stakeholders.
- Clear continuous improvement step.

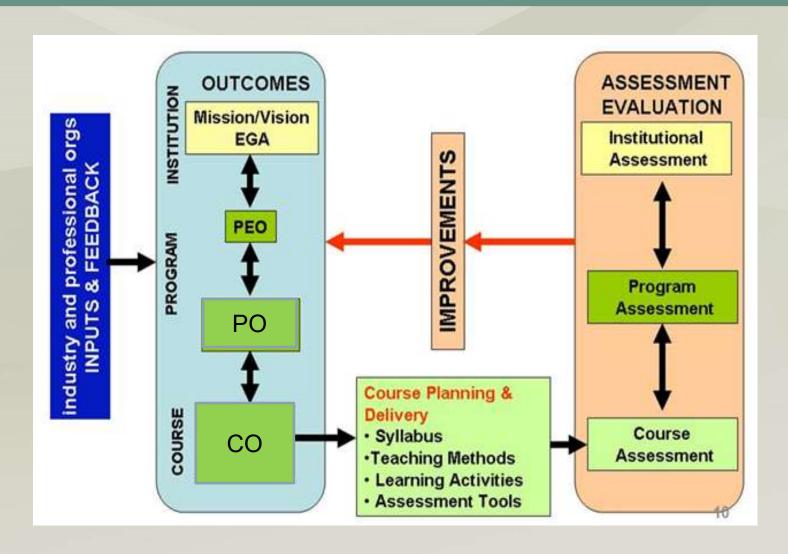
Stakeholders:

EAC Employers Industry Advisors Academic Staff Public and Parents Students

Alumni

fppt.com

The OBE Framework



IQAC Best Practice: Outcome-Based Education (OBE)

The Practice

- Teams comprising IQAC coordinators and other senior faculty members formed to design and develop the plan for OBE implementation.
- For all programs, the program objectives and outcomes were developed in alignment with the department and institution vision and mission, and subsequently the course outcomes were developed in alignment with the programme outcomes.
- Several Orientation and training sessions were conducted for teaching & non-teaching staff, as well as students, to ensure detailed understanding of the plan and process.

IQAC Best Practice: Outcome-Based **Education (OBE)**

Outcome: Continuous quality improvement, mobility students through alignment with international standards program accreditation by NBA

NATIONAL BOARD OF ACCREDITATION

NBCC Place, East Tower, 4th Floor, Bhisham Pitamah M Pragati Vihar, New Delhi-110 003 Tel: +91 11 2436 0620-22; Telefax: +91 11 4308 4903 File No. 26-61/2016-NBA



Amrita School of Pharmacy AIMS Health Sciences campus, AIMS Ponekkara P.O, Edappilly, Kochi, Ernakulam- 682 041, Kerala

Subject: Accreditation status of program applied by Amrita School of Pharmacy, AIMS Health Sciences campus, AIMS Ponekkara P.O, Edappilly, Kochi, Ernakulam- 682 041, Kerala.

This has reference to your application LD. No. 1932-14/06/2016 seeking accreditation by National Board of Accreditation to UG Pharmacy program offered by Amrita School of Pharmacy, AIMS Health Sciences campus, AIMS Ponekskar PO, Edaphilly, Kochi, Ernakulam 682 041, Kerala.

An Expert Team conducted on-site evaluation of the program from 99th to 10th December, 2017. The
report submitted by the Expert Team was considered by the concerned Committees constituted for the purpose
in NBA. The competent authority in NBA has approved the following accreditation status to the program as
given in the table below:

SL No	Name of the Program (UG)	Basis of Evaluation	Accreditation Status	Period of validity	Remarks
(1)	(2)	(3)	(4)	(5)	(6)
1.	Pharmacy	January 2016		Academic Years 2017-2018 to 2019-2020 i.e. upto 30-06-2020	Accreditation status granted is valid for the period indicated in Col.5 or till the program has the approval of the competent authority, whichever is earlier

- It may be noted that only students who graduate during the validity period of accreditation, will be deemed to have graduated with an NBA accredited degree.
- 4. The program has been granted provisional accreditation. Amrita School of Pharmacy, AIMS Health Science campus, AIMS Ponekkara P.O. Edappilly, Kochi, Ernaksham-622 041, Kertal should submit the Compliance Report at least six months before the expiry of validity of accreditation mentioned above to be eligible to be considered by the concerned Committee in NBA for further processing of the accreditation art survival. This could entail further extension of accreditation or a trust, as detened appropriate by NBA. Committees.
- 5. The accreditation status awarded to the program as indicated in the above table does not imply that the accreditation has been granted to Amrita School of Pharmacy, AINS Health Sciences campus, AINS Pontaksar Po, Cadapilly, Koch, Ernakslam 602 dll, Kerala as a whole. As such the Institution should another along with its name including on its letter head et. write that it is accredited by NBA because it is program accreditation and not Institution accreditation. It such an instance comes to NBA's sotiec, this will be viewed seriously. Complete name of the program accredited, level of program and the period of validity of accreditation, as well as the Academic Vear from which the accreditation is effective should be mentioned unambiguously whenever and wherever it is required to indicate the status of accreditation by NBA.



NATIONAL BOARD OF ACCREDITATION



NBCC Place, East Tower, 4" Floor, Bhisham Pitamah Marg. Pragati Vihar, New Delhi-110 003 Tel: +91 11 2436 0620-22; 2436 0654 ; Telefax: +91 11 4308 4903

Date: 31-01-2020

The Dean Amrita Vishwa Vidyapeetham Amrita School of Engineering

Subject: Accreditation status of programs applied by Amrita Vinhwa Vidyapeetham, Amrita School of Engineering, Amrita Nagar PO, Ettimadai, Coimbatore- 641 112, Tamil Nadu.

This has reference to your application I.D. No. 3453-18/01/2019 seeking accreditation by National Board of Accreditation in Tier-I format to UG Engineering programs offered by Amrita Vishwa Vidyapeetham, Amrita School of Engineering, Amrita Nagar PO, Ettimadai, Coimbatore-641 112, Tamil Nadu.

An Expert Team conducted on-site evaluation of the programs from 11th to 13th October, 2019. The report submitted by the Expert Team was considered by the concerned Committees constituted for the purpose in NBA. The competent authority in NBA has approved the following accreditation status to the programs as given in the table

SI. No.	Name of the Program(s) (UG)	Basis of Evaluation	Accreditation Status	Period of validity	Remarks	
(1) (2)		(3)	(4)	(5)	(6)	
1.	Aerospace Engineering		Accredited	Academic Years 2019-2020 to 2021-2022 i.e. upto 30-06-2022	Accreditation status granted is valid for the period indicated in Col.5 or till the program has the approval of the competent authority, whichever is earlier	
2.	Chemical Engineering	Tier-I	Accredited			
3.	Civil Engineering		Accredited			
4,	Electrical & Electronics Engineering		Accredited			

It may be noted that only students who graduate during the validity period of accreditation, will be deemed to have graduated with an NBA accredited degree

- 4. The programs have been granted accreditation for 3 years. Amrita Vishwa Vidyapeetham, Amrita School of Engineering, Amrita Nagar PO, Ettimodal, Coinbatore-641 112, Tamil Nadiu should submit the Compliance Report at least its morth before the early of validity of accreditation mentioned above to be eligible to be considered by the conterned Committee in NBA for further processing of the accreditation status. This could entail further extension of accreditation or a valit, as deemed appropriate by NBA Committees.
- The accreditation status awarded to the programs as indicated in the above table does not in accreditation has been granted to Amrita Vishwa Vidyapeetham, Amrita School of Engineering, Amrita Nagar PO, Ettimadai, Colmbatore-641 112, Tamil Nadu as a whole. As such the Institution should nowhere along with its name including on its letter head etc. write that it is accordined by NBA because it is program accordination and on institution accordination and one institution accordination. It such an instance comes to NBA's notice, this will be viewed seriously. Complete name of the program(s) accorded, let of program(s) and the period of validity of accreditation, as well as the Academic Year from which the accreditation is effective should be mentioned unambiguously whenever and wherever it is required to indicate the status of accreditation by NBA.



IQAC Best Practice: Department Academic Advisory Committee (DAAC)

Objective & Context

- Constituted for effective implementation of OBE process and guidance of academic matters such as:
 - Vision & Mission
 - Program Educational Objectives (PEO),
 - Program Outcomes (PO) & Program Specific Outcomes (PSO)
 - Curriculum design & syllabus,
 - Quality of teaching-learning-evaluation,
 - Course and program outcome attainment
 - Curricular projects
 - Student mobility
 - Overall continuous improvement of all academic processes

IQAC Best Practice: Department Academic Advisory Committee (DAAC)

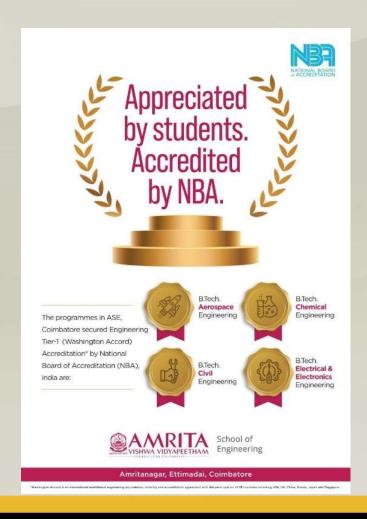
The Practice

DAAC conducts periodic academic audits focusing on:

- Actual syllabus completion against the course plan
- Teaching pedagogy, materials, methods and tools
- Feedback from the students from Amrita University
 Management System (AUMS)
- Actual CO attainment and marks analysis, i.e. improvement in attainment with respect to the implemented action plan
- Difficulty level of the Question papers in Periodical # I,
 Periodical # 2 and End-Semester

IQAC Best Practice: Department Academic Advisory Committee (DAAC)

Outcome: Continuous process improvement & NBA accreditation



Department of Chemical Engineering & Materials Science, Amrita Vishwa Vidyapeetham, Coimbatore – 641 112

<u>Department Academic Advisory Committee – Course-wise Actions Proposed for Continuous Improvement</u>

Academic Year: 2018 - 2019 Semester - II (Even Semester)

Course Code / Name	Name of the Faculty	Previous Suggestions (Yes / No)	Course Summary Report to Department Academic Advisory Committee For End Semester Audit				
			% Syllabus completed	Overall CO Attainment	Suggestions implemented	Suggestions / Remarks (for Next Academic Year)	
15CHE111 Introduction to Chemical Engineering	Dr. Udaya Bhaskar Reddy	Yes	100%	CO1 - 75.1	More time for course project.		
				CO2 - 91.1			
				CO3 - 79.5		 The attainment for the course outcomes is higher than the target. 	
				CO4 - 67.3		The attainments for four consecutive years are higher	
				CO5 - 83.4		than the target.	
				CO6 - 79.9		It is recommended to DAAC that, the target may be raised.	
				CO7 - 84.3		Tulsed.	
				CO8 - 79.6			

Proposed Action Plan:

- 1. Faculty has been asked to continue to with the current teaching methodology.
- 2. The target % may be kept at a higher level (60%)

Dr. Udaya Bhaskar Reddy Ragula Date: July 31, 2019

Chairman – Department Academic Advisory Committee

Objective & Context

- Objective to Integrate research skills into the curricular teaching-learning processes and outcomes, to provide greater flexibility in professional career development
- IQAC recognized that the institutional strength in terms of a vast pool of accomplished research-oriented faculty could be more effectively leveraged to add value to the various degree programs by more formally integrating research goals into the curriculum for the UG and PG programs, to foster research excellence.

Objective & Context

- AMRITA has enforced mandatory research publication requirements for faculty, researchers & PG students. For UG students, publications are mandatory for distinction.
- Quality and quantity of research publications are an important metric for international & national accreditation & ranking agencies such as NAAC, NBA, NIRF, Times Higher Education (THE) and Quacquarelli Symonds (QS).
- As such, the bibliometrics for ascertaining the quality and quantity of research publications are taken directly from indexing and abstracting agencies such as Scopus, Web of Science and Pubmed and there is no submission from the institution. It is every important to ensure that publications have proper affiliation and are free of plagiarism.

The Practice

- The university instituted a curricular requirement that all PG students undertake research leading to a publication, based on the rationale that research and technical writing
- experience would contribute substantially to the intellectual growth of the student. A pilot implementation was carried out at the PG level in engineering programs, and subsequently extended to all PG (masters and doctoral) as well as UG programmes (where the requirement was for graduation with distinction).

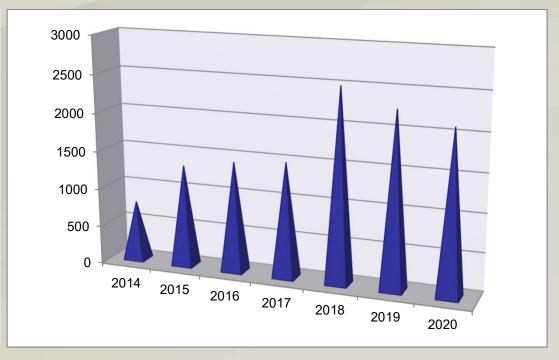
The Practice

The publication coordinator is the nodal officer for research in every school/department/center of the university. Various activities of this publication coordinator include:

- Keeping track of all Scopus-indexed journals and conferences relevant to the areas of research in the department/center and disseminating the same to all faculty, research scholars and students
- Checking the indexing status of various journals and conferences in Scopus and Web of Science and alerting the faculty of the same
- Ensuring quality of publications by mandatory plagiarism check using Turn-it-in
- Coordination of Paper approval form filling and collation process
- Fixing Publication targets of the academic unit
- Supporting the faculty and students by organizing workshops and seminars for research promotion
- Reporting towards facilitation of monetary incentives to faculty & grace marks to students for research publications
- Periodic reporting at Academic Council meetings and statutory compliances

Outcome

Year	Scopus-indexed Publications
2014	787
2015	1341
2016	1448
2017	1509
2018	2520
2019	2323
2020	2149



IQAC Best Practice: Nodal Office for Rankings, **Accreditation & Certifications**

Objective & Context

- The nodal office is necessary as a single point of contact & action for all activities related to rankings, accreditation and certifications for the university. With multiplicity of agencies for rankings and accreditation as also the multi-disciplinary and multi-campus character of AMRITA, IQAC felt that it was necessary to strategize and dovetail all efforts towards the same.
- At university level, IQAC identified Times Higher Education (THE) & Quacquarelli Symonds (QS) as the two standard international ranking agencies and National Institutional Ranking Framework (NIRF) as the sole national ranking agency for participation
- At university level, IQAC functions as a nodal office for rankings, certifications and accreditation with a well-defined process for accurate and complete collection, collation, consolidation and submission of data to NIRF, THE, QS & ARIIA rankings as well as **NAAC** Accreditation
- At campus/school level, IQAC identifies accreditation, certification and ranking agencies pertaining to the discipline such as NBA {Engineering & Pharmacy} AASCB {Business} NABL or ISO

{Health sciences} and works towards its attainment

IQAC Best Practice: Nodal Office for Rankings, Accreditation & Certifications

The Practice

- IQAC coordinators for each school/department/center are responsible for the collection of data for NIRF/THE/QS/NAAC/NBA/ISO for their respective school/department/center.
- Not only does IQAC discuss various issues of interest with respect to collection and presentation of data but as also devise strategies for quality sustenance and improvement like single newsletter for Amrita Vishwa Vidyapeetham to avoid fragmentation of perception due to individual school/department newsletters, expansion of student freeships and scholarships and augmentation of initiatives of Patent cell

IQAC Best Practice: Nodal Office for Rankings, Accreditation & Certifications

Outcome



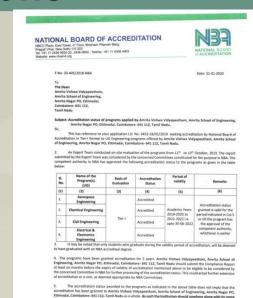
IQAC Best Practice: Nodal Office for Rankings, Accreditation & Certifications

- NAAC Accreditation
- NBA Accreditation
- Times Higher Education (THE) Global Rankings
- Quacquarelli Symonds (QS) Global Rankings
- NIRF Rankings
- ARIIA Rankings
- Swachh Campus Rankings

IQAC Best Practice: Nodal Office for Rankings, Accreditation & Certifications









IQAC Best Practice: Systematic Record Keeping

Mandatory maintenance of records:

- University-level
- Campus-level
- School-level
- Department/Center-level

IQAC Best Practice: Systematic Record Keeping

AMRITA VISHWA VIDYAPEETHAM & AMRITA INSTITUTE OF MEDICAL SCIENCES Internal Quality Assurance Cell (IQAC)

Documents to be maintained at the Campus / School Level

- · Brochure and/or Prospectus
- Calendar
- Academic Council communication, minutes, reports, approvals and resolutions in particular all
 approvals and resolutions relevant to programmes run by the school
- Committee for PG Programmes (CPGP) and Committee for UG Programmes (CUGP) and other committees composition, minutes, transactions and resolutions relevant to programmes run by the school
- Various policy documents (Promotion, Recruitment, HR, Consultancy, Research etc). AMRITA
 University policy documents to supersede wherever applicable
- Regulations, Syllabi, Curricula of all academic programmes offered in the school and Successive curricula, records on revision. Ph.D regulations and norms have to be in line with UGC regulations regarding doctoral programmes
- Board of Studies for all the programmes run by the school (Composition, minutes etc)
- · List, composition and minutes of school committees (academic, administrative, cultural, social etc)
- Approval letters from relevant statutory and governmental agencies
- Admissions records of the last 5 years (Admission files, advertisements, entrance questions papers, OMR sheets etc)
- Examinations records (Examination Calendar and details of actual dates of examination announcement, conduct of examination, evaluation, publication of result, Pattern of QP, question papers and answer scripts, Copies of results published)
- Recruitment of faculty and staff (policies, minutes etc), Recommendation of selection committees, appointment orders, joining reports, relieving orders, Recruitment notification in newspapers etc
- Fee structure and eligibility for various programmes
- · Academic, research and industry linkages (Copies of Memoranda of Understanding, project reports etc)
- Consultancy records
- Library committee (Composition, minutes, actions) and report of the library activities
- Research committee files, procedures and records (OSRP Coimbatore/OGCA-Kochi/CPGP)
- Purchase committee and minutes, Purchase records and norms.
- Criteria for facilitating the faculty for professional development programmes. Records of all faculty being sponsored for seminars/conferences/
- Brochures/flyers of all conferences/seminars/symposia/workshops conducted. Conference proceedings
 can be put in the respective department and/or library
- Land and building records (Can be kept in the largest/flagship institution in the campus or Campus HQ)
- Personnel file, List and personnel records of all staff (teaching, technical and administrative) indicating name, date of birth and age, designation, qualification, experience, data of joining, etc. Photographs to be available for all.
- · Faculty Appraisal and feedback forms
- · Records of student feedback
- Service Conditions
- · Leave Rules and Registers, Acquitance registers

AMRITA VISHWA VIDYAPEETHAM & AMRITA INSTITUTE OF MEDICAL SCIENCES

Internal Quality Assurance Cell (IQAC)

Documents to be maintained at the Department/Centre Level

- Handbook
- · Annual report of the department/centre
- Regulations, Syllabi, Curricula of all academic programmes offered by the department and Successive curricula, records on revision.
- Board of Studies (Composition, minutes etc)
- Approval letters and resolutions from academic council or statutory bodies with regard to the programmes run by the department
- · Alumni Details especially prominent alumni and some records of their feedback
- Annual budget and Budgetary provisions (if any)
- Detailed Classroom process (Mentor list, course plans, class and course committee composition and minutes, conduct of committee meetings, supplementary coaching, etc)
- Timetable
- Workload
- · Attendance registers
- Teaching Staff profile
- Non-teaching (both administrative and technical) staff profile
- Student list (year-wise, batch-wise, class-wise)
- Department infrastructure display through boards / banners
- Research report: A comprehensive report covering details such as current academic and sponsored
 research details, research scholars and their profile, programmes organized to promote research,
 research environment within the department, research facilities available for the teachers and students,
 student research activities, expert lectures delivered by faculty in other Institutions, research outcome
 such as noteworthy publications, achievements, patents, etc. research
- Faculty Development Programmes: Proof of attending and organizing staff development programmes / orientation programmes / refresher programmes, delivering expert lecture/invited lecture outside, etc.
- · Evaluation Procedure and observation records necessary
- Instructional material developed by Staff, if any
- · Minutes of Department meetings and Copy of circulars
- Records pertaining to selection of staff, Pay and reward statements, selection committee minutes relevant to the department, appointment, recruitment, promotion and relieving documents of all staff
- Present and past students profile (Can be maintained by the class advisor/mentor/counsellor)
- Infrastructure report: Department infrastructure including labs giving list of equipments purchased during the last five years.
- · Stock and Equipment register
- Student attendance records
- Student Counselling note books and records
- · Records of special coaching for weak students
- ICT report
- Placement report
- Records of examination and results