

AMRITA SCHOOL OF ENGINEERING, COIMBATORE NBA ACCREDITATION ANALYSIS



Scenic Campuses
& Eco friendly structures



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AMRITA
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NBA ACCREDITATION FOR 3 YEARS

- **20% Ph.D faculty averaged for last 2 Academic Years (AY)**
- **Faculty-Student Ratio (FSR) 1:25 averaged for last 3 AY**
- **Admissions over 60% for program & 60% for institution as a whole**
- **2 Professors with Ph.D or 1 Professor & 1 Associate Professor with Ph.D**
- **Chairperson Should have Ph.D**
- **For 10 NBA Criteria, Criterion Grades should be $\geq 4Y$ & $\leq 2D$**
 - **Y: Good**
 - **C: Concern**
 - **W: Weakness**
 - **D: Deficiency**

NBA ACCREDITATION FOR 6 YEARS

- **30% Ph.D faculty averaged for last 2 Academic Years (AY)**
- **Faculty-Student Ratio (FSR) 1:15 averaged for last 3 AY**
- **Admissions over 75% for program & 60% for institution as a whole averaged for last 3 AY**
- **2 Professors with Ph.D or 1 Professor & 1 Associate Professor with Ph.D**
- **Chairperson Should have Ph.D**
- **For 10 NBA Criteria, Criterion Grades should be $\geq 7Y$ & $\leq 3C$**
 - **Y: Good**
 - **C: Concern**
 - **W: Weakness**
 - **D: Deficiency**

No W or D in any sub-criteria as well

WHY NOT 6 YEARS?

- 30% Ph.D faculty averaged for last 2 Academic Years (AY)
- 2 Professor with Ph.D or 1 Professor & 1 Associate Professor with Ph.D
- Chairperson Should have Ph.D
 - B.Tech Aerospace Engineering (AE)
 - B.Tech Civil Engineering (CE)
 - B.Tech Chemical Engineering (CHE)
 - B.Tech Electrical & Electronics Engineering (EEE)

WHY NOT 6 YEARS?

- **Faculty-Student Ratio (FSR) 1:15 averaged for last 3 AY**
 - B.Tech Aerospace Engineering (AE) {18.30}
 - B.Tech Civil Engineering (CE) {18}
 - B.Tech Chemical Engineering (CHE) {17.50}
 - B.Tech Electrical & Electronics Engineering (EEE) {13.9}
- **Admissions over 75% for program & 60% for institution as a whole**
 - B.Tech Aerospace Engineering (AE) {62.66}
 - B.Tech Civil Engineering (CE) {59.66}
 - B.Tech Chemical Engineering (CHE) {51.66}
 - B.Tech Electrical & Electronics Engineering (EEE) {123.66}

WHY NOT 6 YEARS?

- For 10 NBA Criteria, Criteria grade should be $\geq 7Y$ & $\leq 3C$
 - B.Tech Aerospace Engineering (AE) 8Y & 2C
 - B.Tech Civil Engineering (CE) 5Y & 5C
 - B.Tech Chemical Engineering (CHE) 6Y & 4C
 - B.Tech Electrical & Electronics Engineering (EEE) 5Y, 4C & 1W

WHY NOT 6 YEARS?

- No W or D anywhere in any criteria or sub-criteria

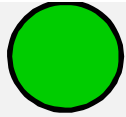
● B.Tech Aerospace Engineering (AE)

● B.Tech Civil Engineering (CE) 2W

● B.Tech Chemical Engineering (CHE) 2W

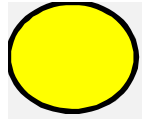
● B.Tech Electrical & Electronics Engineering (EEE)

7W & 1D



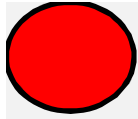
AMRITA SCHOOL OF ENGINEERING, COIMBATORE

- **Institute Vision & Mission**
- **First Year Laboratories**
- **First Year intake**
- **First year faculty commitment & qualification**
- **Effective Teaching-learning process**
- **Research Publications & Funded Projects**
- **NAAC Accreditation & NIRF Rankings**
- **Good reputation**
- **Academic ambience & campus maintenance**
- **Infrastructure, Classrooms, Hostels, Sports facilities**
- **Library with e-journals**
- **Internet connectivity**



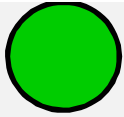
AMRITA SCHOOL OF ENGINEERING, COIMBATORE

- **Continuous improvement implementation**
- **Counseling, mentoring & strategies for weak learners are there but documentation is not well maintained.**
- **Feedback mechanism is there but poor documentation and closing the loop corrective action**
- **Delegation of financial powers is limited**
- **Documentation**
- **Joint research projects with industry**
- **Introduction of minors**



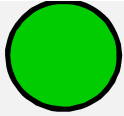
AMRITA SCHOOL OF ENGINEERING, COIMBATORE

- **Faculty office space is nominal and one room is shared by 6 to 8 faculty**
- **First Year result is showing decreasing trend**
- **Outcome Based Education (OBE) has not percolated to stakeholders**
- **Formulation of PEO, PSO, CO, CO-PO mapping done but not properly implemented.**
- **CO not properly defined & not included or aligned to syllabus**
- **Outcome assessment is mainly based on direct assessment**
- **High attainment observed because of low target marks and this discourages improvement and corrective action**
- **Internship should be part of curriculum as per stakeholder feedback**



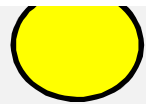
DEPARTMENT OF AEROSPACE ENGINEERING

- **Consistency between institute & department mission & vision**
- **Infrastructure, Offices, Laboratories, Classrooms, Other facilities like sports, hostels & mess**
- **Qualified Faculty with good career advancement**
- **Placement**
- **Interaction with industry & alumni**
- **Research Publications & Funded Projects**
- **Well-equipped laboratories & equipment**
- **Library**
- **Academic Ambience**
- **Attendance of students in classes & laboratories**



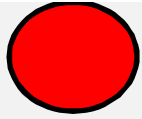
DEPARTMENT OF AEROSPACE ENGINEERING

- **Participation of students in outside activities**
- **Faculty cadre ratio**
- **Faculty retention**
- **Faculty with Ph.D**
- **Project Laboratory**
- **Laboratory maintenance & safety**



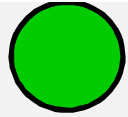
DEPARTMENT OF AEROSPACE ENGINEERING

- **Awareness of POs, PEOs & COs among the students**
- **CO-PO mapping not very convincing**
- **CO coverage is good in final exams but inappropriate in intermediate assessments which focus mainly on quizzes**
- **FSR**
- **Innovation in teaching-learning methods & pedagogy**
- **Innovation in laboratories**
- **Industry projects & Impact analysis of industry interaction**
- **Publication of students in technical magazines**
- **Faculty participation in development & training activities**
- **Gaps identification after attainment of POs & PSOs**
- **Academic audit**
- **Higher studies, placement & Entrepreneurship**



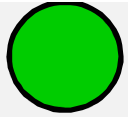
DEPARTMENT OF AEROSPACE ENGINEERING

- **Department workshop**
- **Laboratory staff is well qualified but numbers are small considering the number of students**
- **Curriculum needs revision & relook**
- **Feedback analysis not proper**
- **High attainment observed because of low target marks**



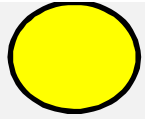
DEPARTMENT OF CIVIL ENGINEERING

- **Consistency between institute & department mission & vision**
- **Infrastructure, Laboratories, Classrooms & its maintenance**
- **Qualified & Number of Faculty**
- **PEOs**
- **Student Intake & academic background**
- **Active Student chapters**
- **Faculty participation in training & development programs**
- **Faculty Cadre ratio**
- **Periodic revision of curriculum**
- **Curriculum Structure**



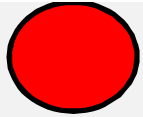
DEPARTMENT OF CIVIL ENGINEERING

- **Research Publications & Funded Projects**
- **Patents & Products**
- **Faculty appraisal**
- **Laboratory maintenance & safety**
- **Academic audit**



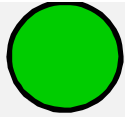
DEPARTMENT OF CIVIL ENGINEERING

- **No evidence of examination of individual contribution in student projects**
- **CO attainment**
- **Higher studies, placement & Entrepreneurship**
- **Innovation in teaching-learning methods & pedagogy**
- **Mentoring for weak students**
- **Graduates without backlogs**
- **Student participation in inter-institute activities**



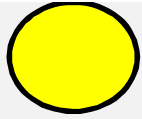
DEPARTMENT OF CIVIL ENGINEERING

- **Consultancy**
- **Industry-interaction**
- **Industry-supported laboratories**
- **Faculty competency in correlation with program specific criteria**
- **Interaction with visiting/adjunct professors**
- **Student computational & software facilities**
- **Outcome Based Education (OBE) awareness has not percolated to stakeholders**
- **Low attainment targets**



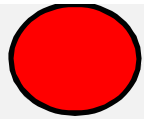
DEPARTMENT OF CHEMICAL ENGINEERING

- **Consistency between institute & department mission & vision**
- **Dedicated, young and enthusiastic faculty**
- **Infrastructure, Space, Sophisticated Research Instruments & Laboratories and maintenance**
- **Faculty Qualification, Cadre & retention**
- **Research Publications & Funded Projects**
- **Consultancy**
- **Innovation in teaching-learning methods & pedagogy**
- **Faculty participation in training & development programs**
- **Project Laboratory**
- **Laboratory support staff**



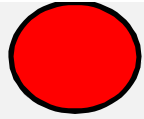
DEPARTMENT OF CHEMICAL ENGINEERING

- **Quality of projects**
- **Quality of students**
- **Student participation in inter-institute activities**
- **Chemical engineering textbooks in library**
- **Experiments done in groups of 3/4**
- **Industry Implant training in curriculum**
- **Publication of students in Technical magazines**
- **Higher Studies & Entrepreneurship**
- **Safety in laboratories**



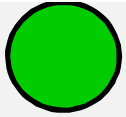
DEPARTMENT OF CHEMICAL ENGINEERING

- **Placement in non-core companies with low pay packages**
- **CO-PO mapping not done properly**
- **Closing the loop & feedback analysis**
- **Old & outdated experiments in chemical engineering laboratory**
- **Seminar in curriculum**
- **Modern design software laboratory**
- **Benchmark is notional and does not justify the content of the course**
- **Placement support from Corporate & Industry Relations (CIR)**
- **Mechanism to allot student projects**
- **Project assessment based only on viva**



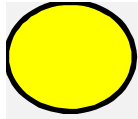
DEPARTMENT OF CHEMICAL ENGINEERING

- **Outcome assessment is mainly based on direct assessment**
- **Low attainment target**



DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

- **Well-designed program**
- **Infrastructure, Laboratories , Computational infrastructure, Software and laboratory maintenance as well as safety**
- **Faculty Qualification, Cadre & retention**
- **Laboratory support staff**
- **Ph.D graduated**
- **Outreach activities**
- **80%+ seats filled**
- **FSR**
- **Public perception & rankings**
- **Student Chapters, activities & participation in inter-institute events**



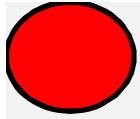
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

- **Multi-disciplinary nature is not observed in line with institute vision**
- **Research equipment in some areas only**
- **OBE implementation is a mechanical process**
- **PSOs are very generic and not specific and there is no mechanism to review them as the curriculum is developed at the university level**
- **Assessment tools & process**
- **Quality of projects**
- **Quality of assignments and these are not addressing all Cos**
- **Faculty appraisal**



DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

- **Faculty awareness & implementation of OBE**
- **Curriculum design innovations**
- **Innovation in teaching-learning methods & pedagogy**
- **Research profile**
- **Quantity and quality of research publications**
- **Consultancy**
- **Industry interaction, training, co-teaching, advisory board & sponsored laboratories**
- **IPR**
- **Placement & Higher Studies**
- **Confusing model of education with multiple campuses following independent question papers**



DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

- **High attainment observed because of low target marks**
- **Visiting/Adjunct faculty**
- **Project/Innovation laboratory**
- **Academic audit**
- **Fluctuations in student intake**