



Aliyah University

Mechanical Engineering Department

Academic Audit

2018-2019

The Academic Audit process of Aliah University focuses on four key functional areas:

1. Academic Management
2. Academic Practices
3. Infrastructure and supportive facilities
4. Initiatives and Supplementation

Academic Management

Information about HOD/ HOD (Officiating)

1] Name: **Dr. Shamim Haidar**

2] Designation: Assistant Professor

3] Qualification: Ph D

4] Teaching experience (in years): 15 years

5] Industry experience (if any in years): NIL

6] Number of teaching hours per week: 20

7] Number of Research Projects/Publications/
Study material developed during

The academic year (provide list in separate sheet): NIL Journal Paper, 1 Conference Paper

1. S Haidar, M. Sekh, A Islam, A Sarkar, G Sutradhar, "Best Practices in Ductile Iron Foundry to Increase Productivity and Profitability; Indian Foundry Congress, January, 2019; Delhi, India.

8] Contribution to enrich quality of teaching-learning during the academic year:
(Seminars/Workshops/lectures/field visits organized): NIL

9] Contribution to the growth and development of the University during the academic year:

Committee	Position held	Work done/ Activity
BOS	Chairman	Preside over the curriculum building process
Departmental Purchase Committee	Chairman	Initiate and finalize purchase process

10] Other responsibilities (Please specify, add rows if required):

1	Prepare Time Table
2	

11] BestPracticesinteaching&academic-administrationintroducedinthedepartmentinthe academic year (Please specify, add rows if required):

1	
2	

S. Haidar
3/7/19

Information about Teaching Members (to be filled by individual Teaching member)

1] Name: Amitava Dutta

2] Designation: Assistant Professor

3] Qualification: M.Tech

4] Teaching experience (in years): 16 years

5] Industry experience (if any in years): NIL

6] Number of teaching hours per week: 22hrs (Including lectures, tutorials, laboratory classes and project supervisions)

7] Number of Research Projects/Publications/
Study material developed during
The academic year (provide list in separate sheet):

I declare that I have developed the study materials of UG subjects (fluid mechanics & fluid machinery) and PG subjects (advanced fluid mechanics and advanced heat transfer) in academic year 2018-2019: I also have updated the Courses/Curriculum Design (UG and PG Course)

8] Contribution to enrich quality of teaching-learning during the academic year:
(Seminars/Workshops/lectures/field visits organized):

1. Attended National Workshop on “Intelligent & Micro-Manufacturing”, organised by Production Engineering Department, Jadavpur University during 27th to 28th March, 2019.

9] Contribution to the growth and development of the University during the academic year:

Committee	Position held	Work done/ Activity
Departmental Purchase Committee	Member	1. Preparation of various e-tender documents related to purchase of various machineries and instruments in departmental labs 2. Preparation of SP1 and SP2, specifications of machines, and pre-bid meeting discussion
Board of Studies (Mechanical Engineering department)	Member	1. Discussion in meeting regarding improvement of contents of various subjects and labs.

		2. Discussion of need of faculty (guest / permanent)
Space allocation	Member	1. Discussion in meeting regarding allocation and utilization of spaces in newtown campus

10] Other responsibilities (Please specify, add rows if required):

1	In-depth discussion on various opportunities (like GATE, PSUs like IOCL, ONGC, NTPC, BHEL, GAIL, integrated M.S. Ph.D. etc) after B.Tech. and/or M.Tech. degree in Mechanical Engineering
2	

11] Best Practices in teaching & academic-administration introduced in the department in the academic year (Please specify, add rows if required):

1	
2	

Anil Kumar
03/07/19

Information about Teaching Members (to be filled by individual Teaching member)

1] Name: Mukandar Sekh

2] Designation: Assistant Professor

3] Qualification: PhD

4] Teaching experience (in years): 9 Years

5] Industry experience (if any in years): NIL

6] Number of teaching hours per week: 22

7] Number of Research Projects/Publications/
Study material developed during

The academic year (provide list in separate sheet): 1 Journal Papers

1. Abhishek Samanta, Mukandar Sekh, Soumya Sarkar, "Influence of different control strategies in wire electrical discharge machining of varying height job", The International Journal of Advanced Manufacturing Technology (2019) 100:1299–1309.

8] Contribution to enrich quality of teaching-learning during the academic year:

(Seminars/Workshops/lectures/field visits organized): Organized a National Seminar (PK Nag Memorial Lecture on 20.12.2018)

9] Contribution to the growth and development of the University during the academic year:

Committee	Position held	Work done/ Activity
BOS	member	Implemented the Draft modified syllabus by the members

10] Other responsibilities (Please specify, add rows if required):

1	
2	

11] Best Practices in teaching & academic administration introduced in the department in the academic year (Please specify, add rows if required):

1	Question papers setting, Invigilation
2	Evaluation of Answer Scripts


03/07/19

Information about Teaching Members (to be filled by individual Teaching member)

1] Name: Dr. Golam Kibria

2] Designation: Assistant Professor

3] Qualification: Ph.D.

4] Teaching experience (in years):7 year

5] Industry experience (if any in years): NIL

6] Number of teaching hours per week: 22 Hours (including lectures, tutorials, practicals and project supervision)

7] Number of Research Projects/Publications/
Study material developed during

The academic year (provide list in separate sheet): One UG level project, two PG level project, one edited book, onebook chapter, 2 journal papers.

Year	UG Level	PG Level
2018-2019	Experimental Investigation on Wire EDM Turning of AISI 1045 Medium Carbon Steel	Experimentation on Spiral Finishing Process of EDM Drilled Hole on Titanium Material By SamimAlam Roll No. MEN172003
		Development and Experiment on Micro Wire EDM Turning of Tungsten By MdFarid Hossain Roll No. MEN172014

Publication:

(a) Book Edited

1. Micro Electrical Discharge Machining Processes-Technologies and Applications, Golam Kibria (Eds.), Muhammad Pervej Jahan (Eds.), Bijoy Bhattacharyya (Eds.), book title series: Materials Forming, Machining and Tribology, Springer International Publishing AG, Switzerland, 2019 (Hardcover ISBN 978-981-13-3073-5, ebook ISBN 978-981-13-3074-2, DOI 10.1007/978-981-13-3074-2).

(b) Book Chapter

1. G. Kibria, A. Sen, H. M. Tariq Aziz, B. Doloi and B. Bhattacharvya, Pulsed Nd:YAG Laser Surface Texturing of Pure Titanium Material, In: Precision Product-Process Design and Optimization: Select Papers from AIMTDR 2016, Pande, Sanjay S., Dixit, UdayShanker (Eds.), ISBN 978-981-10-8767-7, DOI 10.1007/978-981-10-8767-7, Hardcover ISBN 978-981-10-8766-0, Springer Singapore 2018, pp. 361-390.

(c) Journal Papers:

1. G. Kibria , S. Chatterjee , I. Shivakoti , B. Doloi , B. Bhattacharyya, RSM Based Experimental Investigation and Analysis into Laser Surface Texturing on Titanium using Pulsed Nd:YAG Laser, IOP Conference Series: Materials Science and Engineering, Vol. 377, pp. 1-12, 2018
2. G. Kibria ,Leeom P. Lepcha , I. Shivakoti , B. Doloi , B. Bhattacharyya, Pulsed Nd:YAG Laser Micro-turning of Alumina to Study the Effect of Overlap Factors on Surface Roughness Performance, IOP Conference Series: Material Science and Engineering, Vol. 377, pp. 1-7, 2018

**8] Contribution to enrich quality of teaching-learning during the academic year:
(Seminars/Workshops/lectures/fieldvisitsorganized):**

1. Organized 7th Mechanical Day on 20December 2018. 240 students, 25 Faculties were participated.
2. Delivered expert Lecture title “Manufacturing Processes: Fundamental to Advanced Technologies”, One Day Workshop organized by Techno India, Batanagar, Kolkata on 28 February 2019.

9] Contribution to the growth and development of the University during the academic year:

Committee	Position held	Work done/ Activity
Departmental Purchase Committee (DPC)	Convener	1. Preparation of various e-tender documents related to purchase of various machineries and instruments in departmental labs 2. Preparation of SP1 and SP2, specifications of machines, and pre-bid meeting discussion
Departmental Research Committee (DRC)	Coordinator	1. Preparation of requisition of admission of PhD students 2. Progress report seminar presentation 3. Interviewing the candidates who qualify written exam as well as AURET exempted candidates 4. Verification of documents of PhD candidates before final admission
Drinking Water Treatment Plant Committee	Convener	1. Discussion in a meeting to verify the working conditions of all purchased RO machines
Board of Studies (Mechanical Engg. Department)	Member	1. Discussion in meeting regarding improvement of contents of various subjects and labs. 2. Discussion of need of faculty (guest / permanent)

NPTEL LOCAL CHAPTER Committee	Convener	1. Discussion in meeting regarding the enrolment of students in various NPTEL online courses
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10] Other responsibilities (Please specify, add rows if required):

1	Advisements for their future / career in higher studies in India and abroad
2	In-depth discussion on various opportunities (like GATE, PSUs like IOCL, ONGC, NTPC, BHEL, GAIL, integrated M.S. Ph.D. etc) after B.Tech. and/or M.Tech. degree in Mechanical Engineering

11] Best Practices in teaching & academic-administration introduced in the department in the academic year (Please specify, add rows if required):

1	
2	

Signature
03/07/19

Information about Teaching Members (to be filled by individual Teaching member)

- 1] Name : Sunny Akhtar
 2] Designation : Assistant Professor
 3] Qualification : M.E.
 4] Teaching experience (in years) : 6yrs
 5] Industry experience (if any in years) : Nil
 6] Number of teaching hours per week : 17

7] Number of Research Projects/Publications/Study material developed during The academic year (provide list in separate sheet) :

8] Contribution to enrich quality of teaching-learning during the academic year: (Seminars/Workshops/lectures/field visits organized) :

9] Contribution to the growth and development of the University during the academic year:

Committee	Position held	Work done/ Activity
AICTE Affairs Committee	Convenor	Conducting AICTE approval process
Board of Studies (Mechanical Engg. Department)	Member	1. Discussion in meeting regarding improvement of contents of various subjects and labs.
Purchase Committee (Electrical Engg. Dept.)	Member	1. Discussion related to purchase of various machineries and instruments for the laboratories in Electrical Engg. Dept.
Purchase Committee (Mechanical Engg. Dept.)	Member	1. Discussion related to purchase of various machineries and instruments for the laboratories in Mechanical Engg. Dept.

10] Other responsibilities (Please specify, add rows if required):

1	Question papers setting, Invigilation and Answer Scripts evaluation
2	Counseled of B.Tech. students in Mechanical Engineering for their future / career in various opportunities like GATE, PSUs (like IOCL, ONGC, NTPC, BHEL)/ higher studies like M.Tech., M.S., PhD.

11] Best Practices in teaching & academic-administration introduced in the department in the academic year (Please specify, add rows if required):

Sunny Akhtar
03/07/2019

Information about Teaching Members (to be filled by individual Teaching member)

- 1] Name: Mr. Rafiqul Haque
- 2] Designation: Assistant Professor
- 3] Qualification: M.E
- 4] Teaching experience (in years): 12 Years
- 5] Industry experience (if any in years): NIL
- 6] Number of teaching hours per week: 22 Hours (including lectures, tutorials, practicals and project supervision)
- 7] Number of Research Projects/Publications/ Study material developed during The academic year (provide list in separate sheet): 1 PG level project and 1 International Conference

Year	PG Level
2018-2019	EXPERIMENTAL INVESTIGATION ON COPPER POWDER MIXED ELECTRIC DISCHARGE MACHINING OF Ti-6Al-4V ALLOY By SK AJHARUDDIN (Roll No. MEN172001)

Publication:

International Conference Papers:

1. Rafiqul Haque, "Energy Conservation and Environment Protection: Through Green Site Development in Foundry Industry", 67th Indian Foundry Congress (IFC & IFEX-2019), Noida, India, 18-20th January, 2019.

8] Contribution to enrich quality of teaching-learning during the academic year: (Seminars/Workshops/lectures/field visits organized):

9] Contribution to the growth and development of the University during the academic year:

Committee	Position held	Work done/ Activity
ICAME-2020	Convenor	Started to convene the various issues related to ICAME-2020
Hostel Management Committee (HMC)	Member	1. Acted as Warden of Boy's Hostel, Newtown Campus 2. Actively worked for taking care of the students of Boy's hostel daily life

		problems
Computer Purchase Committee	Member	Preparation of various e-tender documents related to purchase of Computers and Laptops for our University and also discussed various issues related to computer purchasing
Special Committee for Departmental Laboratories	Member	Looked after the different aesthetics of departmental laboratories equipments
Training & Placement Cell Committee	Member	Looking after the different issues related to placement of our students and also acted as the departmental co-ordinator
Board of Studies (Mechanical Engg. Department)	Member	1. Discussion in meeting regarding improvement of contents of various subjects and labs. 2. Discussion of need of faculty (guest / permanent)

10] Other responsibilities (Please specify, add rows if required):

1	Preparing question papers for the semester examination and Answer script evaluation
2	Counselled of B.Tech. and M.Tech. students in Mechanical Engineering for their future / career in higher studies in India and abroad
3	In-depth discussion on various opportunities (like GATE, PSUs like IOCL, ONGC, NTPC, BHEL, GAIL, integrated M.S. Ph.D. etc) after B.Tech. and/or M.Tech. degree in Mechanical Engineering

11] Best Practices in teaching & academic-administration introduced in the department in the academic year (Please specify, add rows if required):

1	Taken remedial classes for the weak students
2	

2af
03/07/2019

Information about Teaching Members (to be filled by individual Teaching member)

1] Name: Subha Mondal

2] Designation: Assistant Professor

3] Qualification: MME

4] Teaching experience (in years): 13 years

5] Industry experience (if any in years):

6] Number of teaching hours per week: 18

7] Number of Research Projects/Publications/ Study material developed during The academic year (provide list in separate sheet): 1 SCI Journal paper

Research paper Published:

1. **Mondal S, Alam S, De S** (2018, November) Performance assessment of a low grade waste heat driven organic flash cycle (OFC) with ejector. Energy 163, 849-862. <https://doi.org/10.1016/j.energy.2018.08.160>

8] Contribution to enrich quality of teaching-learning during the academic year: (Seminars/Workshops/lectures/field visits organized):

9] Contribution to the growth and development of the University during the academic year:

Committee	Position held	Work done/ Activity
BOS	Member	Partly drafted the modified syllabus
Departmental representative in engineering common syllabus curriculum committee	Member	Take part in formulation of uniform course curriculum

10] Other responsibilities (Please specify, add rows if required):

1	Prepare time table for the odd and even semester UG and PG class
2	Preparing question paper and Answer script evaluation

11] Best Practices in teaching & academic-administration introduced in the department in the academic year (Please specify, add rows if required):

1	
2	

Subha Mondal
3/07/2019

Information about Teaching Members (to be filled by individual Teaching member)

- 1] Name: Mr. Shahanwaz Khan
- 2] Designation: Assistant Professor (Stage I)
- 3] Qualification: M. Tech.
- 4] Teaching experience (in years):9 years
- 5] Industry experience (if any in years): 4 Years
- 6] Number of teaching hours per week: 22 hrs (Including lectures, tutorials, laboratory classes and project supervisions)
- 7] Number of Research Projects/Publications/Study material developed during the academic year (provide list in separate sheet):

Publications:

International Journal:

Shahanwaz Khan, RajsekharPanua, Probir Kumar Bose. Combined effects of piston bowl geometry and spray pattern on mixing, combustion and emissions of a diesel engine: A numerical approach. *Fuel* 2018; 225: 203–217. <https://doi.org/10.1016/j.fuel.2018.03.139>.

Shahanwaz Khan, RajsekharPanua, Probir Kumar Bose. Influence of Piston Bowl Shape and Number of Holes in Injector on Spray, Combustion and Emissions of a Diesel Engine: A Numerical Research. *International Journal of Recent Technology and Engineering* 2019; ISSN: 2277-3878, vol. 8, Issue 1S4, pp. 44-51.

International Conference:

Shahanwaz Khan, RajsekharPanua, Probir Kumar Bose. Influence of Piston Bowl Shape and Number of Holes in Injector on Spray, Combustion and Emissions of a Diesel Engine: A Numerical Study. *International Conference on Multidisciplinary Innovation in Academic Research*, Organized by IFERP, May 17 - 18, 2019.

Study material developed:

I declare that I have developed the study materials of UG subjects (Thermodynamics and I C Engines) and PG subjects (Jet Propulsion and Principles of Combustion) in academic year 2020-2021: I also have updated the Courses/Curriculum Design (UG and PG Course).

- 8] Contribution to enrich quality of teaching-learning during the academic year: (Seminars/Workshops/lectures/field visits organized):

9] Contribution to the growth and development of the University during the academic year:


Committee	Position held	Work done/ Activity
Anti-Ragging Squad	Jt. Convenor	1. Arrange committee meeting and drafting resolution of meeting which was resolved after threadbare discussion in the meeting.
Institute Induction Programme Cell	Member	1. Organize students' induction programme for newly admitted Engineering students.
Board of Studies (Mechanical Engineering Department)	Member	1. Discussion in meeting regarding improvement of contents of various subjects and laboratories.
Maintenance Committee	Member	1. Discussion in meeting regarding requirement of various maintenance related components like Security, House-keeping, air conditioning, lift etc.
Purchase Committee (Civil Engineering)	Member	1. Preparation of various e-tender documents related to purchase of various machineries and instruments in Civil Engineering laboratories.

10] Other responsibilities (Please specify, add rows if required):

1	In-depth discussion on various opportunities (like GATE, PSUs such as IOCL, ONGC, NTPC, BHEL, GAIL, integrated M.S. Ph.D. etc) after awarding B.Tech. and/or M.Tech. degree in Mechanical Engineering.
2	

11] Best Practices in teaching & academic-administration introduced in the department in the academic year (Please specify, add rows if required):

1	
2	


03/07/19

Academic Practices (for the academic year: 2018-2019)

- 1] Total number of teaching-days in the academic year: 198
- 2] Total number of permanent teaching staff: 08
- 3] Total number of permanent teaching staff with PhD: 03
- 4] Number of programmes offered (please specify): B.Tech in MEN and M.Tech in MEN
- 5] Number of sanctioned intake of students and Number of actual admissions:

B.Tech	Intake capacity		Actual admission
	Regular	60	
	Lateral	06	06 (Male)
M. Tech		18	18 (Male)

- 6] How many teaching members have attended Orientation Programme/ Refresher Course/ FDP/ Workshop/ Training Programme/ Research Methodology Course/ Capacity Building Programme etc.: 04
- 7] Number of Orientation Programme/ Refresher Course/ FDP/ Workshop/ Training Programme/ Research Methodology Course/ Capacity Building Programme etc. organised by the department: 01
- 8] Number of Training Programme/ Consultancy offered by the department: Nil
- 9] Number of academic collaborations made by the department: Nil
- 10] Innovative practices (please specify):

Teaching-Learning-Evaluation process (for the academic year: 2018-2019)

- 1] Does teaching members participate in course designing?
Yes
- 2] Does the department have a structured Board of Studies or similar academic body to design/ expand/ modify course content?
Yes
- 3] Does the programme follow:
 - a. CBCS structure
 - b. Elective-based structure✓
 - c. Any other, please specify
- 4] Does the department follow Academic Calendar implemented By the University? Yes
- 5] Use of Teaching-Learning tools/ platforms (Please specify)
 - a. OHP✓
 - b. LCD
 - c. Interactive Boards

- d. LMS
- e. Any other

6] Use of ICT in Teaching-Learning-Evaluation

- a. e-books
- b. e-journals
- c. research database/ repositories
- d. IT enabled classroom
- e. Online assignment
- f. Online assessment
- g. Online feedback

7] Weekly class hour per course (average): 35

8] Whether remedial/ tutorial classes included in class routine? Yes

9] Does the programme offered has scope of Internship/ Project/ Field work/ Seminar presentation/ Industrial training?

Yes

10] Does the department follow progressive evaluation of students? yes

11] Number of students appeared and passed in the academic year:

Research output (for the academic year: 2018-2019)

1] Does the department offer MPhil/ PhD/ Post-Doctoral Programme: M.Tech & PhD.
(Please specify): Yes

2] Number of students/ scholars registered/ enrolled
in MPhil/ PhD/ Post-Doctoral Programme (If the answer to Q1 is yes): 01

3] Number of publications in refereed & peer-reviewed journals: 07

4] Number of book/ edited-volume/ book-chapter published with ISBN: 1Book and 1 Book
chapter

5] Number of patents registered: Nil

6] Number of revenue generating events (Consultancy, Training Programme,
MDP/ EDP etc.): Nil

7] Number of Seminar/ Conference/ Workshop/ FDP etc organised at
State/ National/ International level: Nil

8] Number of sponsored research projects: Nil

- a. Completed
- b. Ongoing

9] Number of collaborative research projects: Nil

- a. Completed

b. Ongoing

10] Any innovative research initiative adopted and implemented (please specify):

Infrastructure & facilities (departmental level)

1] Number of classrooms: 07

2] Number of ICT-enabled classrooms: Nil

3] Number of laboratories: 10

4] Availability of licensed software/ databases: Nil

5] Number of tutorial rooms: Nil

6] Number of seminar halls: Nil

7] Number of rooms for the teaching members: 02

8] Number of computer/ printer/ scanner available:

- a. In laboratory
- b. In teachers' enclosure
- c. For Research scholars
- d. For Administrative purpose

9] Whether Internet facility available in classrooms/ laboratory / Teachers' enclosure?
In teacher's enclosure and some specific laboratory

10] Whether reprographic facility available? Yes

11] Number of washroom facility (for male): 04

12] Number of washroom facility (for female): 02

13] Presence of appropriate signage: Yes

14] Barrier free environment ensured? Yes

Initiatives and Supplementation for Students:

1] Whether Mentorship (Teacher-driven) for students is in place? Yes

2] Do the students participate in extra-academic activities and pursue Co-curricular activities? Yes

3] Does the department arrange Industry-visit/ Industrial lecture/ Field-trips/ Excursions/
Archeological trips/ Exhibitions etc. for students? Some times

4] Does the department arrange seminars/ workshops/
skill-development programmes etc. for students? Some times

5] Does the department arrange programmes for the students focusing

Soft-skill and Personality development? No

6] Does the department have any Student Forum/ Club/ Chapter etc.? No

7] Does the department have a students' feedback mechanism in place? No

8] Are the students provided with Training and Placement support? Yes

9] Do the students receive ICT-based teaching? No

10] Can the students access digital resources offered by the University library? Yes

11] Please indicate the number of students those have qualified for NET/SET/GATE/GMAT/SLET/WBCS/UPSC or any other Competitive Exam (for the specific period)

Information is not available with the department

12] Please indicate the number of students those have progressed for higher studies (for the specific period)

Information is not available with the department

13] Please indicate the number of students those were offered placements by the University (for the specific period).

Summary of departmental members

Year	No. of Teacher	No. of Technical Assistant	No. of Office Staff (Group-C)	No. of Office Staff (Group-D)
2018-2019	08	03	Nil	Nil



