

Description of PhD Admission Exams

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For more information: Prof. Ramzi Othman (rothman1@kau.edu.sa)

	<p style="text-align: center;"> Kingdom of Saudi Arabia Ministry of Education King Abdulaziz University College of Engineering Mechanical Engineering Department </p>	
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PhD admission exam

Mechanical Engineering/ Applied Mechanics

Thursday 15th February 2024 (10:00 am– 12:00 pm)

Department meeting room (24F15) Engineering building.

The exam is an in- the-class **open book** exam that covers three areas: Dynamics, Mechanics of Materials, and Vibrations. The exam aims to assess the student's ability to solve, analyze and discuss problems in the following fields.

References

i) **Dynamics (of rigid bodies):**

- R.C. Hibbeler, Engineering Mechanics-Dynamics, Pearson, any edition.
- J.L. Meriam & L.G. Kraige, Engineering Mechanics-Dynamics, Wiley, any edition.

ii) **Mechanics of Materials:**

- F.P. Beer et al., Mechanics of Materials, McGraw-Hill, any edition.
- R.C. Hibbeler, Mechanics of Materials, Pearson, any edition.

iii) **Vibrations:**

- S.A. Rao, Mechanical Vibrations, Pearson, any edition

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PhD admission exam

Mechanical Engineering/ Mechanical Design

Thursday 15th February 2024 (10:00 am– 12:00 pm)

Department meeting room (24F15) Engineering building.

The exam is an in- the-class **open book** exam that covers three areas: Dynamics, Mechanics of Materials, and Design. The exam aims to assess the student’s ability to solve, analyze and discuss problems in the following fields.

References

i) **Dynamics (of rigid bodies):**

- R.C. Hibbeler, Engineering Mechanics-Dynamics, Pearson, any edition.
- J.L. Meriam & L.G. Kraige, Engineering Mechanics-Dynamics, Wiley, any edition.

ii) **Mechanics of Materials:**

- F.P. Beer et al., Mechanics of Materials, McGraw-Hill, any editon.
- R.C. Hibbeler, Mechanics of Materials, Pearson, any edition.

iii) **Design:**

- R.G. Budynas, and K.J. Nisbett, Shigley’s Mechanical Engineering Design, McGraw-Hill, any edition.

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PhD admission exam

Mechanical Engineering/ Manufacturing and Materials

Thursday 15th February 2024 (10:00 am– 12:00 pm)

Department meeting room (24F15) Engineering building.

The exam is an in- the-class **open book** exam that covers three areas of Manufacturing Processes, Material Removal Processes and Metrology & Quality Control. The exam aims to assess the student's ability to solve, analyze and discuss problems in the following fields.

References

i) **Manufacturing Processes (Casting, Metal Forming, Welding, Heat Treatment):**

- Fundamentals of Modern Manufacturing: Materials, Processes, and Systems, Mikell P. Groover, Any addition, Wiley.
- Manufacturing Engineering and Technology, Serope Kalpakjian, Any edition, Prentice Hall.
- MENG 332 Lecture Notes.

ii) **Material Removal Processes:**

- Fundamentals of Modern Manufacturing: Materials, Processes, and Systems, Mikell P. Groover, Any addition, Wiley.
- Manufacturing Engineering and Technology, Serope Kalpakjian, Any edition, Prentice Hall.
- MENG 434 Lecture Notes.

iii) **Metrology & Quality Control:**

- Fundamentals of Dimensional Metrology, Dotson, Harlow & Thompson, any edition, Delmar Cengage Learning
- Quality Improvement, D. H. Besterfield, any edition, Pearson.
- MENG 436 Lecture Notes.

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MENG 332 L.N



MENG 434 L.N



MENG 436 L.N