# [A-3]COURSE SYLLABUS

## 1. Course Description (Approximately 100 words)

In the course of «Fundamentals of defectoscopy of machine-building products and metal constructions» includes the control of machine tools and metal structures by X-rays and gamma rays, ultrasonic control of machine tools and metal constructions, magnetic control of machine tools and metal structures, checks for machine tools and metal constructions, non-destructive diagnostic methods, corrosion-testing and chemical analysis of articles and metal constructions, metallographic research of welded joints.

## 2. Course Goals and Objectives (Approximately 100 words)

The aim of the course is to provide the students with the latest knowledge, skills and experience required by the standard of education in accordance with the profile of the quality assurance and quality control of machine tools and metal constructions.
The aim of the discipline is to control machine tools and metal constructions by X-ray and gamma rays, ultrasound control of machine tools and metal constructions, magnetic control of machine tools and metal constructions, seal control of machine tools and metal constructions, diagnostic methods for non-destructive control. , testing and chemical analysis of machine tools and metal constructions, corrosion-testing and metallographic surveys of welded joints.

## 3. Textbook (Title, Author, Publisher, Year of Publication, etc.)

1. Abralov M.A., Abralov M.M. Payvand birikmalarning defektoskopiyasi. O'quv qullanma – T.: Talqin, 2013 - 184b.

## 4. Reference

1. Edward R. Bohard. Welding: Principles and Practces - American Welding Society - Connect Learn Success, 2012
2. Kazakov, N.F (1985). "Diffusion Bonding of Materials". University of Cambridge. Retrieved 2011-01-13.
3. Lancaster, J.F. (1999). Metallurgy of welding (6th ed.). Abington, Cambridge: Abington Pub. ISBN 1-85573-428-1.

## 5. Course Requirements and Grades

86-100 “A” Making the conclusion and decision. Being able to think positively. Being able to observe independently. Being able to use the knowledge practically. Recognizing the meaning. Knowing and telling the meaning of subject. Getting the idea.
71-85 “B” Being able to observe independently. Being able to use the knowledge practically. Recognizing the meaning. Knowing and telling the meaning of subject. Getting the idea.
55-70 “C” Recognizing the meaning. Knowing and telling the meaning of subject. Getting the idea.
0-54 “D” Having no exact idea.
Home work 10%
2 mid Term exam 60%

## 6. Course Calendar

| Week | Main Content |
|---|---|
| 1 | Tashqi nazorat va vizual nazorat qilish. |
| 2 | Rentgen va gamma nurlari nazorati afzalliklari.Rentgen va gamma nurlari xu |
| 3 | Rentgen va gamma nurlari nazorati jihozlari. |
| 4 | Ultratovush yordamida nazorat qilish.Ultratovush yordamida nazorat |
| 5 | Soya usuli moxiyati. Ultratovush nazorati jihozlari |
| 6 | Magnit induksiya usulining fizik mohiyati. Magnit kukuni usuli. |
| 7 | Rangli sifat nazorati va lyuminessent nazorati texnikasi va jihozlari. |
| 8 | Rangli sifat nazorati va lyuminessent nazorati usulining fizik mohiyati. |
| 9 | Germetikligini nazorat qilish.O`tkazuvchanlıkka sinash. Kerosin, siqilgan xav |
| 10 | Nazoratning vakuum usuli. Korroziyabardoshlika sinovi va kimyo taxlili. Met |
| 11 | Buzmasdan nazorat qilish diagnostik usullari.Golografik usuli mohiyati |
| 12 | Akustik nazorat usuli. Issiqlik ta’siri ostida nazorat usuli. |
| 13 | Payvand birikma sifat nazoratida texnika xavfsizligi |
| 14 | |