

Objectives of the Course

This course aims to teach advanced plaster forming and mold-making techniques used in ceramic and glass design. It is intended that students gain knowledge and skills in multi-part mold construction, casting techniques, model development, detailed surface applications, and methods for serial production. Through practical studies, students are expected to enhance their technical proficiency, plan production processes, and use mold technology creatively. In this context, the course supports fundamental competencies such as problem-solving, analyzing production processes, and developing professional-level applications, in alignment with field-specific qualifications.

Course Contents

Advanced plaster forming techniques, multi-part mould making, casting methods, model preparation processes, surface detailing and finishing techniques.

Development of mould systems for mass production. Production process management and creative mould design with applied studies.

Recommended or Required Reading

Materials Required: Plaster (ceramic quality - suitable for making models and moulds), modelling tools (spatula, chisel, wire cutter, knife set, etc.), silicone or latex mould release agents, rubber or plastic mould bands, clay or wax for modelled forms, measuring instruments (ruler, caliper, spirit level, etc.), plastic or plywood sheets (for mould walls), mixing bowl and mixer (for preparing plaster), sandpaper and surface smoothing sponges, sandpaper and surface smoothing sponges.), plastic or plywood sheets (for mould walls), mixing container and mixer (for plaster preparation), sandpaper and surface smoothing sponges, protective equipment (apron, gloves, mask, goggles), liquid casting mud (optional, for casting applications), labelling materials (pens, tape, name tags), cleaning materials (cloth, sponge, bucket, etc.).

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Planned Learning Activities and Teaching Methods

Theoretical Lessons: • Fundamental knowledge of plaster forming and mold-making techniques Workshop Activities: • Plaster casting, model creation, and multi-part mold making • Hands-on demonstrations by the instructor • Application of students' creative designs • Analysis and evaluation of the works in terms of technical and aesthetic aspects

Recommended Optional Programme Components

It is recommended to use dust mask, goggles and gloves in the workshops. Due to the fast drying feature of plaster, time should be planned well in applications. Providing the necessary materials before the start of the course ensures that the application process is efficient. Controlled use of plaster and other materials is of great importance in terms of maintaining the hygiene of the workshop. Making individual experiments on different plaster types and casting methods reinforces learning. In addition, photographing and taking notes of the work done step by step facilitates the follow-up of the process.

Instructor's Assistants

This course is supported by lecturers and research assistants who are experts in their fields. Assistants guide students during practical work and provide individual or group support on course content and technical issues. Teaching assistants help students to transform their theoretical knowledge into practice and ensure that the application process proceeds efficiently and safely.

Presentation Of Course

is taught both theoretically and practically. In weekly lessons, theoretical information about plaster forming and mold-making techniques is provided and reinforced through workshop activities. Students learn techniques such as plaster casting, modeling, and multi-part mold making through hands-on practice. The instructor monitors students' progress and provides necessary guidance. The course is supported by individual projects and group work, helping students develop both creative and technical skills.

Dersi Veren Öğretim Elemanları

Dr. Öğr. Üyesi Serkan Tok

Program Outcomes

1. Students can have information about plaster moulding production methods and the content of the course.
2. Students can use materials related to plaster. Students can produce simple plaster models.
3. Student can create model, core mould and simple partial mould with plaster.
4. The student can make multi-part moulds using plaster moulds and can make production.
5. Can solve problems with applied studies, can cast using plaster moulds for industrial production and can produce products.

Weekly Contents

Order	Preparation	Info	Laboratory	Teaching	Methods	Theoretical	Practical
1	Preliminary preparation on basic material information regarding plaster and mould making. Practical work on the introduction and use of modelling tools.	https://dergipark.org.tr/tr/download/article-file/3491048 (s.115-124) https://dergipark.org.tr/tr/download/article-file/1578743 (s.60-62) https://earsiv.anadolu.edu.tr/xmlui/bitstream/handle/11421/26687/681751.pdf?sequence=1&isAllowed=y (s.22-24) https://acikbilim.yok.gov.tr/bitstream/handle/20.500.12812/611996/yokAcikBilim_10181365.pdf?sequence=-1 (s.9-24)	Lecture Method, Question-Answer, Application	Explanation of plaster model forming methods			
2	Learning and applying basic shape and modelling techniques with plaster. Students should design simple models at beginner level.	https://dergipark.org.tr/tr/download/article-file/3491048 (s.115-124) https://dergipark.org.tr/tr/download/article-file/1578743 (s.60-62) https://earsiv.anadolu.edu.tr/xmlui/bitstream/handle/11421/26687/681751.pdf?sequence=1&isAllowed=y (s.22-24) https://acikbilim.yok.gov.tr/bitstream/handle/20.500.12812/611996/yokAcikBilim_10181365.pdf?sequence=-1 (s.9-24)	Lecture Method, Question-Answer, Application	Explanation of plaster model forming methods			

Order PreparationInfo**Laboratory TeachingMethods Theoretical Prac**

3	Modelling techniques and analysis of complex forms. Students should experiment with the use of plaster to create complex geometric forms. https://dergipark.org.tr/tr/download/article-file/3491048 (s.115-124) https://dergipark.org.tr/tr/download/article-file/1578743 (s.60-62) https://earsiv.anadolu.edu.tr/xmlui/bitstream/handle/11421/26687/681751.pdf?sequence=1&isAllowed=y (s.22-24) 	Lecture Method, Question-Answer, Application	Explanation of plaster model forming methods	Details of the method suitable for the process can be seen.
4	Learning model preparation and application techniques for two-part moulds. Students should design models suitable for mould making. https://dergipark.org.tr/tr/download/article-file/3491048 (s.115-124) https://dergipark.org.tr/tr/download/article-file/1578743 (s.60-62) https://earsiv.anadolu.edu.tr/xmlui/bitstream/handle/11421/26687/681751.pdf?sequence=1&isAllowed=y (s.22-24) 	Lecture Method, Question-Answer, Application	Explanation of plaster model forming methods	Preparation for plaster
5	Practical work on two-piece mould making techniques. Students should make and apply simple mould designs. https://dergipark.org.tr/tr/download/article-file/3491048 (s.115-124) https://dergipark.org.tr/tr/download/article-file/1578743 (s.60-62) https://earsiv.anadolu.edu.tr/xmlui/bitstream/handle/11421/26687/681751.pdf?sequence=1&isAllowed=y (s.22-24) 	Lecture Method, Question-Answer, Application	Explanation of plaster model forming methods	Preparation for plaster
6	Techniques for three-part mould making. Students should work on mould designs. https://dergipark.org.tr/tr/download/article-file/3491048 (s.115-124) https://dergipark.org.tr/tr/download/article-file/1578743 (s.60-62) https://earsiv.anadolu.edu.tr/xmlui/bitstream/handle/11421/26687/681751.pdf?sequence=1&isAllowed=y (s.22-24) 	Lecture Method, Question-Answer, Application	Explanation of plaster model forming methods	Preparation for plaster
7	Planning of mould systems and designing the production process. Students should plan the production process of their prepared designs. https://dergipark.org.tr/tr/download/article-file/3491048 (s.115-124) https://dergipark.org.tr/tr/download/article-file/1578743 (s.60-62) https://earsiv.anadolu.edu.tr/xmlui/bitstream/handle/11421/26687/681751.pdf?sequence=1&isAllowed=y (s.22-24) 	Lecture Method, Question-Answer, Application	Explanation of plaster model forming methods	Preparation for plaster
8	The midterm exam will assess the students' knowledge and skills in modelling, mould making and casting techniques learned so far. Students should make practical preparation for the theoretical and practical exam.			Vize Sınavı
9	Practical studies on casting techniques. Students should prepare moulds for casting processes. https://dergipark.org.tr/tr/download/article-file/3491048 (s.115-124) https://dergipark.org.tr/tr/download/article-file/1578743 (s.60-62) https://earsiv.anadolu.edu.tr/xmlui/bitstream/handle/11421/26687/681751.pdf?sequence=1&isAllowed=y (s.22-24) 	Lecture Method, Question-Answer, Application	Explanation of plaster model forming methods	Explanation of subject notice stage making plaster
10	Development of mass production oriented mould systems and application of these methods. Students should work on mould design suitable for mass production. https://dergipark.org.tr/tr/download/article-file/3491048 (s.115-124) https://dergipark.org.tr/tr/download/article-file/1578743 (s.60-62) https://earsiv.anadolu.edu.tr/xmlui/bitstream/handle/11421/26687/681751.pdf?sequence=1&isAllowed=y (s.22-24) 	Lecture Method, Question-Answer, Application	Explanation of plaster model forming methods	Preparation for plaster casting on
11	Learning and practical application of surface detailing techniques on plaster models and plaster moulds. Students should practice surface treatment techniques. https://dergipark.org.tr/tr/download/article-file/3491048 (s.115-124) https://dergipark.org.tr/tr/download/article-file/1578743 (s.60-62) https://earsiv.anadolu.edu.tr/xmlui/bitstream/handle/11421/26687/681751.pdf?sequence=1&isAllowed=y (s.22-24) 	Lecture Method, Question-Answer, Application	Explanation of plaster model forming methods	Preparation for plaster casting on
12	Working on the difficulties encountered in moulds and solutions to these problems. Students should practice producing solutions through the difficulties they encounter. https://dergipark.org.tr/tr/download/article-file/3491048 (s.115-124) https://dergipark.org.tr/tr/download/article-file/1578743 (s.60-62) https://earsiv.anadolu.edu.tr/xmlui/bitstream/handle/11421/26687/681751.pdf?sequence=1&isAllowed=y (s.22-24) 	Lecture Method, Question-Answer, Application	Explanation of plaster model forming methods	Preparation for plaster casting on

Order Preparation Info**Laboratory Teaching Methods Theoretical Practice**

13	Group work on creative mould design. Students should create creative mould designs and discuss them in group. https://dergipark.org.tr/tr/download/article-file/3491048 (s.115-124) https://dergipark.org.tr/tr/download/article-file/1578743 (s.60-62) https://earsiv.anadolu.edu.tr/xmlui/bitstream/handle/11421/26687/681751.pdf?sequence=1&isAllowed=y (s.22-24) https://acikbilim.yok.gov.tr/bitstream/handle/20.500.12812/611996/yokAcikBilim_10181365.pdf?sequence=-1 (s.9-24)	Lecture Method, Question-Answer, Application	Explanation of plaster model forming methods	Preparation for plaster casting
14	Final preparations before the final project and practical project presentations. Students should make final arrangements for their final projects. https://dergipark.org.tr/tr/download/article-file/3491048 (s.115-124) https://dergipark.org.tr/tr/download/article-file/1578743 (s.60-62) https://earsiv.anadolu.edu.tr/xmlui/bitstream/handle/11421/26687/681751.pdf?sequence=1&isAllowed=y (s.22-24) https://acikbilim.yok.gov.tr/bitstream/handle/20.500.12812/611996/yokAcikBilim_10181365.pdf?sequence=-1 (s.9-24)	Lecture Method, Question-Answer, Application	Explanation of plaster model forming methods	Preparation for plaster casting
15	(Final Project and Evaluation): Final project presentation and evaluation. Students will present their final project and will be evaluated by the instructors. https://dergipark.org.tr/tr/download/article-file/3491048 (s.115-124) https://dergipark.org.tr/tr/download/article-file/1578743 (s.60-62) https://earsiv.anadolu.edu.tr/xmlui/bitstream/handle/11421/26687/681751.pdf?sequence=1&isAllowed=y (s.22-24) https://acikbilim.yok.gov.tr/bitstream/handle/20.500.12812/611996/yokAcikBilim_10181365.pdf?sequence=-1 (s.9-24)	Lecture Method, Question-Answer, Application	Retouching and firing of plaster castings	Preparation for plaster casting

Workload

Activities	Number	PLEASE SELECT TWO DISTINCT LANGUAGES
Vize	1	1,00
Final	1	1,00
Uygulama / Pratik	1	10,00
Ders Öncesi Bireysel Çalışma	1	15,00
Uygulama / Pratik Sonrası Bireysel Çalışma	10	15,00
Ara Sınav Hazırlık	5	4,00
Final Sınavı Hazırlık	5	10,00

Assesments

Activities	Weight (%)
Vize	40,00
Final	60,00

	P.O. 1	P.O. 2	P.O. 3	P.O. 4	P.O. 5	P.O. 6	P.O. 7	P.O. 8	P.O. 9	P.O. 10	P.O. 11	P.O. 12	P.O. 13	P.O. 14	P.O. 15
L.O. 1	5	4	3	2	2	2	3	3	2	2	5	4	3	3	3
L.O. 2	5	3	4	2	3	2	2	2	2	2	5	4	3	3	2
L.O. 3	5	4	5	2	4	2	2	2	2	2	5	4	3	4	3
L.O. 4	5	4	5	2	4	2	2	2	2	2	5	4	3	4	4
L.O. 5	5	5	5	3	5	3	3	3	3	3	5	5	4	5	5

Table :

- P.O. 1 :** Sanat, tasarım ve seramik alanına yönelik donanıma sahip olma ve edindiği bilgileri uygulama becerisi
- P.O. 2 :** Araştırma, deneyimleme, analiz, değerlendirme ve yorumlama becerisi
- P.O. 3 :** Seramik alanının gerektirdiği kısıtlamaları göz önünde bulundurarak, ortaya konan sorun ve gereksinimleri karşılayacak bir ürünü/yapımı ya da süreci tasarlama ve yaratma becerisi
- P.O. 4 :** Kendi alanını diğer disiplinlerle ilişkilendirerek bireysel ve grup içinde çalışma becerisi
- P.O. 5 :** Sanat ve tasarım sorunlarını belirleme, tanımlama ve çözme becerisi
- P.O. 6 :** Fikir ve sanat eserleri alanlarında mesleki ve etik sorumluluk bilinci
- P.O. 7 :** Etkin iletişim kurma ve kendini ifade edebilme becerisi
- P.O. 8 :** Sanat/tasarım çözümlerinin, evrensel ve toplumsal boyutlarda etkilerini anlamak için gerekli genişlikte eğitim
- P.O. 9 :** Yaşam boyu öğrenmenin gerekliliği, bilinci ve bunu gerçekleştirebilme becerisi
- P.O. 10 :** Çağın sorunları hakkında kendini geliştirebilme bilinci
- P.O. 11 :** Sanat ve tasarım uygulamaları için gerekli olan teknikleri ve yenilikleri kullanma becerisi
- P.O. 12 :** Araştırma yönü kuvvetli, teknolojik gelişmeleri takip eden ve alanına adapte edebilme bilinci
- P.O. 13 :** Sanat ve tasarım bilincini toplumla paylaşarak sosyal, kültürel ve toplumsal sorumlulukları kavrama, benimseme bilinci
- P.O. 14 :** Yaratıcılık sürecinde mesleki özgüvenle birlikte kavramsal bilgi birikimi ve becerileri pekiştirmeye bilinci
- P.O. 15 :** Sanatı ve tasarımını toplumsal bir sorumluluk boyutunda kavrayan ve alanına yönelik uluslararası gelişmeleri takip eden bireyler yetiştirmek
- L.O. 1 :** Öğrenciler alçı kalıpla üretim yöntemleri, dersin içeriği hakkında bilgi sahibi olabilir.
- L.O. 2 :** Öğrenciler, alçı ile ilgili malzemeleri kullanabilir. Basit alçı modeller üretebilir.
- L.O. 3 :** Öğrenci, alçı ile model, çekirdek kalıp ve basit parçalı kalıp oluşturabilir.
- L.O. 4 :** Öğrenci, alçı kalıp kullanarak çok parçalı kalıplar yapabilir ve üretim gerçekleştirebilir.
- L.O. 5 :** Uygulamalı çalışmalarla problem çözebilir, endüstriyel üretim amaçlı alçı kalıp kullanarak döküm yapabilir ve ürün üretebilir.