



Course name	Conservation and restoration of glass
Entity running the course	Faculty of Ceramics and Glass/Department of Conservation and Restoration of Ceramics and Glass
Entity for which the course has been prepared	Faculty of Ceramics and Glass/Department of Conservation and Restoration of Ceramics and Glass
Course type	Specialty course, compulsory course.
Year of study/semester; Type of studies	Year IV, semester 7 and 8; full time master's degree studies
ECTS credits	4
Academic tutor	Ph.D. Katarzyna Wantuch-Jarkiewicz
Aim of the course	The course aims to present the theoretical and practical methods and means used in the conservation and restoration of historical, archaeological and contemporary glass, based on the example of the historical glass of museums or private collections. The range of issues covers glass in combination with other materials. Implementation of the assignments of increasing complexity in terms of a formal nature, development of the student's artistic awareness and individual predispositions, shaping skilful use of the techniques introduced.
Prerequisites	Passing the III-rd year courses – the methodology of conservation and restoration of glass, conservation chemistry, technology of glass, copy of a glass detail and glass processing techniques, advanced skills in the area of proper use of the methods and means applied to glass conservation, glass workshop, established knowledge in the area of glass history, technology and archeology.
Learning outcomes:	
– <i>knowledge</i>	The student has an advanced knowledge in the field of correct recognition of the techniques and technologies applied, they have knowledge of workshop fundamentals, they correctly classify the tested object, they correctly select methods for preparing conservation documentation and executing conservation and restoration of selected objects.
– <i>skills</i>	Acquisition of the skill of accurate determination and selection of a proper technique of conservation and restoration of glass. The student consciously uses the workshop and is able to perform simple conservation and restoration of a glass object. They can properly compare and analyze the ongoing project. They can prepare a graphic documentation of the entire project.
– <i>personal and social competence</i>	The student is able to critically interpret the developed issue, they learn to properly present the results of their research, they report on the treatments carried out and are able to account for the choices made, they can express pertinent opinions and judgments, they can fluently speak about the object of their research.
Course content	Analysis of manufacturing techniques and state of preservation of a selected historical or modern object made of glass. Preparation of initial inventory and photographic documentation. Workshop exercises – executing conservation and restoration of a glass object. Preparation of presentation. Preparation of documentation.
Course form and number of course hours	Lectures, consultations, exercises in the studio and workshops of the department, conservation project. 60 hours/sem.
Assessment methods and criteria	90% executing assignments/active participation in classes/working critique. 10% open critique.
Assessment type	Semester 7 – graded pass. Semestr 8 – graded examination review.

Literature	<ol style="list-style-type: none"> 1. Biszkont J., 2005, Późnośredniowieczne wyroby szklane z ratowniczych badań archeologicznych w rejonie ulic Szewskiej i Wita Stwosza we Wrocławiu, /Late medieval glassware of rescuing archaeological research in the area of streets Szewska and Wita Stwosza in Wrocław/, Śląskie Sprawozdania Archeologiczne, /Silesian Archaeological Reports/, V. 47 (2005), 193-206, fig. 6, tab. 1. 2. Brill R.H., 1999. Chemical Analyses of Early Glasses, t. 1, 2, Corning, New York. 3. Ciepiera-Kubalska S., 199, Szklance fletowate ze Starego Miasta w Warszawie (XIV/XV – 1 ćwierci XVII wieku), /Glass flute vessels from the Old Town in Warsaw (XIV / XV – the first quarter of the seventeenth century)/ [in:] Acta Universitatis Nicolai Copernici, Archeologia XIX – Nauki Humanistyczne – Społeczne, /Archaeology of the XIX century – Humanistic – Social Sciences/, Notebook 223, pp. 25 - 42. 4. Davison S., Newton R., 1996, Conservation of Glass; Butterworth-Heinemann, Oxford. 5. Dekówna M., 1980, Szkło w Europie wczesnośredniowiecznej, /Glass in the early medieval Europe/ Zakład Narodowy imienia Ossolińskich, /National institute under the name of Ossoliński/, Wrocław. 6. Domaślawski W., 1971, Hydrofobizacja szkła przy pomocy alkilochlorosilanów i alkiloalkoksylanów, /Hydrophobization of glass/, Scientific Notebooks of the University of Mikołaj Kopernik, Zabytkoznawstwo i Konserwatorstwo 4, /Science of Monuments and Conservation 4/, Toruń 1971, p. 111 – 125. 7. Greiner – Wronowa E., Pusoska A., Piasecka D., 2007, Biały nalot na obiektach szklanych w gablotach muzealnych, /White coating on the glass objects in museum display cases/, [in:] Szkło i Ceramika, /Glass and Ceramics/, Yearbook 58, pp. 26 - 31. 8. Iwanicka M., 2008, Przykłady zastosowania tomografii optycznej (OCT) do badań materiałowych i analizy struktury dzieła sztuki, /Examples of the use of optical tomography (OCT) for research and analysis of the material structure of the work of art./, [in:] Acta Universitatis Nicolai Copernici, Zabytkoznawstwo i Konserwatorstwo XXXVI – Nauki Humanistyczne – Społeczne, /Science of Monuments and Conservation XXXVI – Humanistic- Social Sciences/, Notebook 386, Toruń, pp. 176 - 190. 9. Kunicki – Goldfinger J.J., 2008, Unstable historic glass: symptoms, causes, mechanisms and conservation, [in:] Reviews in Conservation Number 9, pp. 47 – 60. 10. Kunicki-Goldfinger J.J., 2005, Konserwacja i badania dwóch szklanych naczyń z rzymskiego Novae, /Conservation and research of two glass vessels from the Roman Novae/ [in:] Acta Universitatis Nicolai Copernici, Archeologia XXIX, Nauki Humanistyczne – Społeczne, /Archaeology XXIX, Humanistic- Social Sciences/ Notebook 370, pp. 269 - 278. 11. Łydzba – Koczyńska B., 2013, Analizy specjalistyczne i konserwacja zabytków ze średniowiecznego skarbu z Głogowa z 1987 r., /Specialized analyzes and conservation of monuments of the medieval treasure of Głogów of 1987/, 2013. 12. Majewski E., 1907, Wskazówki do konserwowania wykopaliisk przedhistorycznych, /Tips for conservation of prehistoric excavations/, Światowit, v. 8. 13. Markiewicz M., 1991, Szkło w ikonografii – problemy interpretacyjne, /Glass in iconography - problems of interpretation/ [in:] Acta Universitatis Nicolai Copernici, Archeologia XVIII, Nauki Humanistyczne – Społeczne, /Archaeology XVIII, Humanistic- Social Sciences/ Notebook 210, pp. 289 - 293. 14. Markiewicz M., 2005, Doświadczalne, hutnicze formowanie szklanych pucharów dzwonowatych na podstawie wczesnonowożytnych oryginałów, /Experimental, hot moulding of bell glass beakers on the basis of the early modern originals/ [in:] Acta Universitatis Nicolai Copernici, Archeologia XXIX, Nauki Humanistyczne – Społeczne, /Archaeology XXIX, Humanistic- Social Sciences/ Notebook 370, pp. 279 - 284. 15. Nawracki M., 1999, Późnośredniowieczne i nowożytne szkła z terenu zamku krzyżackiego w Toruniu, /Late medieval and modern glasses from the area of the castle of the Teutonic Knights in Toruń/ [in:] Acta Universitatis Nicolai Copernici, Archeologia XXVII, /Archaeology XXVII/ Toruń, pp. 53 – 132. 16. Koob S.P., 2006, Conservation and Care of Glass Objects, Archetype Publications, 17. Miszczyk T., 2006, Dawne hutnictwo szkła w Karkonoszach i Górach Izerskich, / Former glassworks in Karkonosze and Izerski Mountains [in:] Archeologia Żywa /Living Archaeology/ 2 (36), 18. Krawczyk M., Romiński W., 1999, Wyroby szklane z XII – XVIII w. z badań archeologicznych w Nysie, /Glassware of the XII - XVIII century of the archaeological research in Nysa/, Silesia Antiqua 40, pp. 133 – 159. 19. Olczak J., 1978, Analiza naczyń szklanych, /Glass vessels analysis/, [in:] Materiały sprawozdawcze z badań zespołu pobenedyktynskiego w Mogilnie, z. 1, /Reports on the research of post-Benedict team in Mogilno/, Biblioteka Muzealnictwa i Ochrony Zabytków, /Library of Museology and Protection of Monuments/, Series B, Vol. 52, Warsaw 1978, pp. 130 - 155. 20. Olczak J., 1965, Wytwórczość szklarska na terenie Polski we wczesnym średniowieczu. Studium archeologiczno – technologiczne, / The glass output in Poland in the early Middle Ages. The archaeological and technological study/, [in:] Studia z dziejów rzemiosła i przemysłu, /Studies of the history of craft and industry/ Vol.8, Z. Kamińska edit., Studia i materiały z historii kultury materialnej, /Studies and materials of the history of material culture/, Vol. 35, A. Gieysztor edit., Wrocław – Warszawa – Kraków 1968, p. 7. 21. Purowski T., 2012, Wyroby szklane w kulturze łużyckiej w międzyrzeczu Noteci i środkowej Odry. Studium archeologiczno – technologiczne, /Glassware in Sorbian culture in the region between Noteć and middle Odra. The archaeological and technological study/ ; Instytut Archeologii i Etnologii Polskiej Akademii Nauk, Warszawa, /Institute of Archaeology and Ethnology of the Polish Academy of Sciences, Warsaw/. 22. Purowski T., 2013, Wyroby ze szkła i „szklatego fajansu” odkryte na cmentarzysku kultur łużyckiej i regionalnej grupy kręgu halsztackiego w Domaślawiu, pow. Wrocławski, /Glassware and "glassy faience" discovered in the cemetery of Sorbian culture and regional group of Hallstatt in Domaślaw, district of Wrocław/, Archeologia Polski, /Archaeology of Poland/ v. LVIII, pp. 23 – 87. 23. Rubnikowicz M., 1959, XVIII – wieczne naczynia szklane odkryte na Starym Mieście w Toruniu, /The XVIII century glass vessels discovered in the Old Town in Toruń/, [in:] Acta Universitatis Nicolai Copernici, Archeologia XIV, /Archaeology XIV/, Archeologia Szkła /Archaeology of Glass/ 3, Toruń, pp. 73 – 84. 24. Rzeźnik P., 1998, Paciorki szklane z wczesnośredniowiecznego grodziska w Gostyniu na Dolnym Śląsku, /Glass beads from the early medieval settlement in Gostyn in Lower Silesia/ [in:] Kraje słowiańskie w wiekach średnich. Profanum i sacrum, /Slavic countries in the Middle Ages. The profane and the sacred/ edit. H. Kóčka – Krenz, W. Łosiński, Poznań, pp. 380 – 391. 25. Soldenhoff B., 1991, Próba określenia typów zniszczeń szkieł archeologicznych, /Attempting to specify the types of archaeological glass destruction/, [in:] Acta Universitatis Nicolai Copernici, Archeologia XIX, Nauki Humanistyczne – Społeczne, /Archaeology XIX, Humanistic- Social Sciences/, Notebook 223, Toruń, pp. 97 - 123. 26. Soldenhoff B., 1991, Stan badań nad konserwacją szkła archeologicznego w Polsce, /The state of research on the conservation of the archaeological glass in Poland / [in:] Acta Universitatis Nicolai Copernici, Archeologia XVIII, /Archaeology XVIII/, Toruń, pp. 205 – 208. 27. Soldenhoff B., 1993, Usuwanie substancji inkrustujących warstwy korozyjne w szklach archeologicznych, /Removal of the substances encrusting corrosive layers in archaeological glasses/ [in:] Naukowe podstawy ochrony i konserwacji dzieł sztuki oraz zabytków kultury materialnej, /Scientific basis of protection and conservation of the works of art and monuments of material culture/, Toruń, pp. 234 – 246.
------------	--



AKADEMIA SZTUK PIĘKNYCH
IM. EUGENIUSZA GEPPERTA
WE WROCŁAWIU

Teaching aids	
Language of instruction	Polish with the possibility of running the course in English.