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*ISENSE WP5*

*GUI4DE – Guidelines for*

*D/deaf students*

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## Summary

General information .....	3
Aim of GUI4DE.....	3
Services for enrolment phase .....	4
Services in-itinere .....	5
Services for the job-placement.....	6
Training of university staff .....	6
Highlights and Conclusions .....	7
Appendix I – Italian mapping .....	8
Appendix II – Polish mapping .....	12
Appendix III – German mapping .....	16
Appendix IV – Austrian mapping .....	19
Appendix V – Spanish mapping .....	25
Appendix VI – World mapping .....	33



## General information

This document is the result of Working Package 5 (WP5) of the ISENSE project. It has been developed through a series of dedicated working groups focused on the inclusion of deaf students in higher education. The final version has been optimised thanks to feedback provided by end users, ensuring that the content reflects the real needs and perspectives of the actual target group.

The Universities involved in the agreement of this document are the following:

- University of Tuscia, Viterbo (Italy)
- University of Cordoba, Cordoba (Spain)
- University of Klagenfurt, Klagenfurt (Austria)
- University of Mittelstands, Bielefeld (Germany)

The document has been also approved by:

- Tiber Umbria Comett Education Programme, Perugia (Italy)
- Associazioni Unite dei Sordi della Regione Umbria, Perugia (Italy)
- Fundacion CNSE para la supresion de barreras de comunicacion. Madrid (Spain)
- Stowarzyszenie Rozwoju "Pitagoras", Rzeszów (Poland)
- Blue Cinema TV srl, Rome (Italy)

## Aim of GUI4DE

This document serves as a reference framework for European universities aiming to enhance the inclusion of deaf and hard-of-hearing students throughout the academic journey. It consolidates findings and best practices gathered through the ISENSE project. The aim is to establish common strategies and policies promoting equal access, academic success, and career inclusion for deaf students in higher education.

GUI4DE – Guidelines for D/deaf students is the result of the combination of the analyses conducted by three round tables on services for: (i) Enrolment phase; (ii) in-itinere; and (iii) job placement. The outcomes of the working groups have been combined with the outputs of the mapping phase, which has been carried out from September 2023 to July 2025 by using an ad-hoc implemented questionnaire shared through Google Modules to the public and private Universities in Italy, Spain, Austria, Germany and Poland. The participation in the questionnaire was voluntary. Additionally, a global desk-based analysis was conducted to identify international best practices and existing support



frameworks for deaf students outside the European context, in order to ensure a comprehensive and comparative perspective.

All supporting policy strategies, activities and procedures proposed in this document are:

- In accordance with all the parties involved in the document realization;
- A guide for the institution in the successful adoption of shared policy to further diversity, inclusion, access and equity at universities;
- An integration of the already implemented and validated inclusion strategies at European universities;

This document reflects the view only of the parties; thus, the European Commission cannot be held responsible for any use which may be made of the information contained therein.

## Services for enrolment phase

This section contains the good practices to be considered for providing the proper services during the enrolment phase. Firstly, universities are encouraged to proactively provide online information in accessible formats (e.g., sign language-based videos) and to adopt inclusive communication strategies from the first point of contact. Then, to ensure accessible entry into higher education, universities should offer the following services:

- Pre-admission counselling with national sign language interpreters, available at orientation desks;
- Support for administrative procedures during enrolment, including individual tutoring and translation of written materials into sign language;
- Adaptation of entrance exams, including provision of sign language interpretation, visual communication aids (AI-based tools or similar), and alternative formats (written instead of oral tests);
- Use of assistive technologies such as video remote interpreting systems; speech-to-text; note-takers;
- Fee exemptions or reductions, where applicable, for deaf students based on specific regulatory frameworks;
- At least one person per department at the administrative level trained in communicating in national sign language;
- The university website must be adapted to the WCAG 2.1 standard



## Services in-itinere

This section contains the good practices to be considered to support deaf students during the academic studies, considering support during lectures and exams and support for the Erasmus+ mobility. Firstly, it is clear how deaf students require continuous, individualized support tailored to their needs. Recommended services include:

- Professional sign language interpretation services, with sufficient hourly coverage. The services can be both in presence or online;
- Each deaf student should receive individualized assistance to evaluate the necessary supports and design appropriate curricular adaptations in different subjects;
- Peer tutoring and note-taking services, especially during lectures and exam preparation;
- Pedagogical and psychological counselling, offering assistance with study methods, time management, and emotional well-being;
- The service in the previous point should be free of charge, strictly confidential and working on the basis of self-referral by the student; as well as it should guarantee five free meetings. At the end of the process, the modalities of continuation should be evaluated;
- Conversion of learning materials into accessible formats, including subtitles, adapted texts, and visual aids;
- Technical aids, such as captioning software, speech-to-text systems, induction loops, and accessible classroom technology;
- Academic accommodations, such as: extended time (up to 50%) for exams; format changes (written instead of oral); sign language interpreter support during exams;
- For mobility programs (e.g., Erasmus+), universities should provide: (i) Sign language and mobility counselling for application procedures; (ii) Support in identifying inclusive partner institutions abroad and (iii) Possibility of increased financial support for mobility based on disability-related needs;
- Places in student dormitories adapted to the needs of deaf students, as for example rooms with light signals;
- Teachers in the field where deaf people study have been trained in conducting classes for deaf people through specific training programs annually offered by the University;
- Universities should promote the administration of psychometric tests to assess the level of anxiety and self-esteem of deaf students by fostering the use of digital tools based on virtual reality. They should be delivered at different time period in order to monitor the academic study of deaf students;



## Services for the job-placement

This section contains the good practices to be considered to support deaf students for job placement. Firstly, where possible, universities should also promote internships and mentoring opportunities in collaboration with the public and private sectors. Universities must strengthen the transition from academia to the labor market by offering:

- Dedicated career counselling for deaf students, including CV writing support and interview preparation with sign language interpreter assistance;
- Access to job boards tailored to students with disabilities, including reserved listings;
- Collaboration with disability-friendly employers and organisations promoting inclusive hiring;
- Awareness training for employers on deafness, inclusion, and communication strategies;

## Training of university staff

This section contains the good practices to be considered for delivering training courses to improve the awareness on deafness among lecturers, administrative staff, and peers. For the structures and contents of the courses, Universities can take inspiration from SONAR, realized within WP3 of the ISENSE project.

- Personnel development departments at universities should organize training courses for lecturers and administrative staff in order to train them on the main topics related to the Deaf culture and enhance Deaf awareness at least twice per academic year;
- Universities should organize information sessions on studying with deafness at least twice per academic year. These information sessions provide an opportunity to educate peers about deafness, its characteristics, and dispel any misconceptions;
- Training courses should be modular and focused on the following topics: deaf culture and diversity management; skills and strategies to communicate with deaf people; basics of national sign language;
- Training courses should include the use of innovative technologies, such as virtual reality (VR), especially considering the use of VR for empathy.
- Considering the previous points, appropriate virtual scenarios that help to empathize with deaf students and deeply understand the problems that such students have to face during academic



studies should be adopted. For the contents of the scenarios, Personnel development departments at universities can take inspiration from scenarios realized within the WP3 of the ISENSE project;

- Courses should be available online as tutorials to guarantee lifelong access to the contents for all the university members;

## Highlights and Conclusions

The inclusion of deaf students in higher education requires a systemic and sustainable approach. As main highlights, European universities should:

- Establish dedicated Inclusive Education Units with trained staff.
- Adopt Universal Design principles in teaching, assessment, and infrastructure.
- Ensure standardized access to interpretation and accessibility services.
- Invest in digital and assistive technologies.
- Foster a culture of Deaf awareness and empathy through training and inclusive communication.

By aligning with these guidelines, institutions can contribute to an accessible, equitable, and inclusive European Higher Education Area for all students, regardless of hearing ability.



## Appendix I – Italian mapping

26 Universities have replied to the questionnaire. In the following table the Universities are reported within the number of students with deafness actually enrolled:

Name of the University	Number of students
Università Cattolica del Sacro Cuore	68
Politecnico di Milano	20
Università dell'Aquila	4
Università del Salento	11
Università degli Studi di Trieste	3
Università degli studi di Modena e Reggio Emilia	16
Università della Valle d'Aosta	1
Università degli Studi di Bari Aldo Moro	37
Università per Stranieri di Siena	4
Politecnico di Bari	2
Università degli studi di Genova	38
Università del Piemonte Orientale	12
Università degli studi di Urbino Carlo Bo	15
Università degli Studi di Teramo	3
Università del Sannio	2
Università di Roma “Sapienza”	79
Università degli Studi di Roma “Foro Italico”	6
Campus BioMedico	0
Università degli studi di Bergamo	11
Università di Pisa	più di 10
Università degli studi dell'Insubria	2
Alma Mater Studiorum Università di Bologna	56
Università degli Studi di Brescia	6
Università per Stranieri di Perugia	0
Politecnico di Torino	12
Università IULM	11

By analysing the results to each question, the present document describes the main services related to each macro-area.

### Enrolment phase

The main services reported by the Universities are as follows:

- Tutoring services upon specific requests;
- Supporting during enrolment for administrative procedure;
- Entrance orientation desk with LIS interpreting service;
- Supporting during the written admission test through the use of specific equipment or through text reading by a LIS interpreter or by adopting the text of the exam to the sign language;
- Supporting during the oral admission test (master's degree) through LIS interpreter;



- Exemption from admission fees where specific conditions are met

In addition, by searching on internet a further interesting service offered by the University of Tor Vergata (Rome), which does not reply to the questionnaire, has been found consisting in E-LISI, which is a LIS video-interpreting service for communication (similar to the one proposed at University of Rome Sapienza).

### **In-itinere phase**

In this macro-area, we have considered both services for lectures and exams, as well services for attending Erasmus mobility.

#### *Lectures and exams*

The main services reported by the Universities are as follows:

- LIS interpreting service;
- Peer tutor for supporting during lessons (including notetaking) and study assistance;
- Meetings with expert psychologists;
- Meetings with expert pedagogists on study methods;
- Document/text conversion into accessible formats, for example subtitles;
- Set of compensatory measures during lectures, such as using speech recognition software to obtain automatic transcription of spoken lectures, Recommendation to teachers to stay in front of the audience in a manner that facilitates lip-reading. (when possible), .
- Set of compensatory measures during exams, such as additional times (up to 50%), LIS interpreter, conversion from oral to written exam, translation of the text into sign language;

As concerning the LIS interpreting services, each University has different specification. For example, the Polytechnic of Turin offers at maximum 300 hours for all the degree, the University of Rome Sapienza offers 16 hours per week and a maximum of 64 hours per months including both class attendance and exams. In addition, by searching on internet the University of Ca' Foscari (Venice), which does not reply to the questionnaire, has been found consisting in one or two courses per semester with LIS interpreting service.

#### *Erasmus mobility*

This is the area that was shown to be the most critical due to the lack of standardized services. The few Universities that reported services in the field have mentioned:



- Support of a tutor and LIS interpreters for helping the student is assisted in understanding the call for applications and in the stages of submitting the application
- Support in contacting hosting institutions and in verifying the presence of adequate and specific support aids according to individual needs, as well as understanding the services offered.
- An interesting service was the one reported by University of Modena and Reggio Emilia, where it is possible to request an increase of the scholarship budget for specific needs.

### *Job placement*

Three out 26 Universities have replied that no services for job placement addressed to deaf students are present. Among others, the main services are as follows:

- Targeted services accompanying students with disabilities into the work market, including CV preparation and assistance through LIS interpreter during meetings;
- Implementation of a platform where job offers reserved for protected categories are posted;

As depicted, also the job placement represents an area in which more efforts should be done to standardize the services offered to the students with deafness.

### *Research projects*

In addition to the services, we seek to analyse which are the research projects or other interesting initiatives actually conducted within the Italian university on the thematic of inclusion for deaf students. 17 out 26 University does not report any information, whereas the other replies allowed to highlight the following:

- Università Cattolica del Sacro Cuore organizes the "Put Yourself in My Shoes" event;
- Università dell'Aquila adheres to CORIFISI, the Interuniversity Center for Guidance, Research, Advanced Training, and Social Inclusion, which deals with communication disorders and hearing disabilities;
- Università del Salento is currently involved in research projects in collaboration with the Ente Sordi of the Puglia Region;
- Università degli Studi di Trieste has a project funded by funds 752/22 for university staff training on disability and learning disorders, in which dedicated video lessons for university professors on the topic of hearing impairment have been realized;
- Università per Stranieri di Siena conducts awareness-raising activities through introductory educational workshops on LIS;



- Università del Sannio participates in the Prius Table, which brings together disability delegates from all Campania universities to initiate synergistic actions in favor of students with disabilities, not only hearing impairments;
- Università degli Studi di Roma “Foro Italico” participates in the Para Limits research project that aims to investigate the reality of high-level university student athletes with disabilities. In particular, the research aims to identify factors that can promote and/or hinder the development of dual careers: academic and competitive sports in the presence of a disability;
- Alma Mater Studiorum Università di Bologna reports that within the degree course in Languages and Technologies for Intercultural Communication, courses in Italian Sign Language are conducted;
- Università IULM is currently involved in two research projects on museum accessibility in LIS involving deaf students (one with the Leone Museum in Vercelli and one with Mudec in Milan).



## Appendix II – Polish mapping

4 Universities have replied to the questionnaire. In the following table the Universities are reported within the number of students with deafness actually enrolled:

Name of the University	Number of deaf students
<b>Wroclaw University of Environmental and Life Sciences</b>	2
<b>University of Bielsko-Biala</b>	0
<b>University of Wroclaw</b>	13
<b>Magdalena Abakanowicz University of the Arts Poznan</b>	2

By analysing the results to each question, the present document describes the main services related to each macro-area.

### Enrolment phase

The main services reported by the Universities are as follows:

- live or online sign language interpreter,
- Recruitment Office employees trained in serving students with disabilities,
- reporting the need to adjust recruitment directly to the Recruitment Committee,
- induction loops,
- university website adapted to the WCAG 2.1 standard,
- exemption from recruitment fees,
- possibility of obtaining other support upon individual request.

In addition, an online research was conducted among universities that did not respond to the questionnaire. In the materials they posted on their websites, we found information about the following services:

Adam Mickiewicz University in Poznań offers places in student dormitories adapted to the needs of students with disabilities (rooms with light signals for students who are deaf/hard of hearing).

University of the National Education Commission in Kraków runs a spatial orientation course at the University and its immediate surroundings.

### In-itinere phase

In this macro-area, we have considered both services for lectures and exams, as well services for attending Erasmus mobility.

#### *Lectures and exams*

The main services reported by the Universities are as follows:



- live or online sign language interpreter,
- induction loops,
- access to teaching materials before classes,
- teachers in the field where deaf people study have been trained in conducting classes for deaf people,
- adaptation of the educational process,
- equipment rental for people with disabilities,
- teaching assistant,
- e-laboratory system adapted to the WCAG 2.1 standard,
- possibility of obtaining other support upon individual request.

In addition, an online research was conducted among universities that did not respond to the questionnaire. In the materials they posted on their websites, we found information about the following services:

Adam Mickiewicz University in Poznań offers: support of a teaching or laboratory assistant and support of a psychological consultant for difficulties in the study process. The workshops has various devices supporting the visualization of the material being processed, e.g. interactive boards, projectors and movable flipcharts, scanners, magnetic and cork boards.

The Jagiellonian University in Kraków also offers lecturers' use of teaching aids enabling the reception of information through the visual channel (e.g. multimedia presentations, slides, graphs, charts, maps, illustrations, photos) during classes.

The John Paul II Catholic University Of Lublin - Noteworthy is the English language course for deaf people, available only at a few universities in Poland. The language course is conducted in small groups of several people, enabling direct contact between the teacher and the students. In addition, the university has prepared guidelines for people conducting classes with deaf students.

At the University of Siedlce you can get a supporting assistant who helps you complete documents related to the educational process, take notes from teaching classes, use library resources and contact lecturers in order to obtain teaching materials. His tasks also include informing students about the facilities introduced by the University and supporting students with disabilities in completing all formalities related to the education process in dean's offices and other organizational units of the University.

Wrocław University of Science and Technology enables students with disabilities and special needs: to deal with matters in dean's offices out of turn; priority for registration for PE classes on preferential



terms, for foreign language courses on preferential terms, placement at the beginning of the list when registering for elective subjects at the faculty.

At the Warsaw University of Life Sciences a student with a disability, after prior arrangement with the instructor, has the right to record a lecture for his or her own use.

University of Warsaw offers the following facilities for passing exams (similar facilities are also offered by other universities):

- extension of the test/exam duration,
- changing the form of the test/examination from a standard one to an individually selected one in a situation where the student's health condition prevents the student from presenting knowledge in standard conditions,
- preparing the exam paper in an alternative form,
- providing adaptive equipment during the test/examination,
- providing support from a Polish sign language interpreter.

### *Erasmus mobility*

The universities listed the following facilities:

- online sign interpreter services,
- induction loops
- a person with a disability receives an increased amount of funding upon departure; in the case of greater disability, you can apply for additional financial resources

The online research brought the same answer - the main convenience indicated by universities and related to Erasmus activity is the possibility of obtaining financial support for students with special needs.

### **Job placement**

One university did not indicate any work-related activities. The remaining three listed the following services provided by Career Offices:

- Career Office staffed with employees trained in serving people with disabilities and knowledgeable about the labour market for people with disabilities,
- online counselling, meetings with a career advisor on Teams, e-mail consultations (e.g. CV consultation)
- career planning materials.



Other work-related services for students indicated by universities on their websites:

SGH Warsaw School of Economics has the opportunity to choose job and internship options for people with disabilities and special needs. Thanks to this functionality, you can filter and browse selected ads faster and more efficiently.

The Career Office of University of Siedlce cooperates with many representatives of various companies, offers job opportunities, internships, workshops and training.

AGH University of Krakow offers workshops and consultations, vocational training, paid internships in companies and institutions of the students' and graduates' dreams, and meetings with career advisors. These activities are carried out largely in cooperation with the Institute of Regional Development Foundation, among others through the implementation of pro-professional projects.

Wrocław University of Science and Technology supports disabled drivers by helping them obtain a category B driving license and adapting their car. Having a driving license can definitely broaden your job search horizons.

#### Research projects

None of the universities that took part in the study conducted or participated in a project dedicated to deaf people. Two universities indicated more general projects:

- a general project submitted to the National Centre for Research and Development for grants to support students with disabilities,
- Section of Athletes with Disabilities of the University of Wrocław.



## Appendix III – German mapping

Twelve universities were consulted through their websites, and additional bibliographic sources were reviewed regarding the services provided by universities to students with disabilities in Germany. After thoroughly reviewing the services offered by each of the selected institutions, focusing initially on general services and later on those specifically for students with hearing impairments, we created a short list of universities that provide tools and services for students with various disabilities. Subsequently, we focused on services for students with hearing impairments.

All universities in Germany are required to provide specialized services for students with disabilities, in accordance with German accessibility laws and regulations. This requirement is based on the General Equal Treatment Act (AGG) and the United Nations Convention on the Rights of Persons with Disabilities, both of which Germany has ratified. These laws mandate that universities create an inclusive and accessible environment for students with disabilities or special needs.

### **What services do these universities typically offer?**

- Personalized advice and support: Each university has a center or department that offers guidance to students with disabilities to ensure they have access to all academic services and resources.
- Adaptation of educational materials: This includes adapting exams, textbooks, and other academic resources to ensure they are accessible.
- Campus accessibility: This may include modifying buildings, installing ramps, and ensuring classrooms and materials are accessible.
- Sign language courses: Some universities also offer training in sign language or interpretation to enhance accessibility.
- Virtual classroom software: Refers to any platform used by the university to deliver virtual classes, such as Blackboard, Google Meet, Zoom, etc.
- Class note-takers: Any service (either provided by the university or voluntary staff) that supports students in the task of taking notes in class.
- Class recordings/streaming: Availability of class recordings or live streaming.
- Exam adaptation and organization: Universities have protocolized services that examine possible adaptations in testing situations (mainly exams but also other assessments). This may be handled by Disability Services or another university unit.
- Provision of desks and chairs (for students with physical disabilities): The university provides desks and chairs for students with physical disabilities.



- Interpreter services: The university offers interpreter services for students with hearing disabilities.
- Braille transcriptions: The university provides Braille transcriptions for visually impaired students.
- Rental/loan of adaptation software and assistive technology: The university offers software for adaptations and the rental/loan of assistive technology.
- Personal assistant service: The university offers a personal assistant service to help students with disabilities.
- Study assistance service: The university offers a service to assist students in their studies.

**These tools and services can be found at the following universities:**

- Bielefeld University
- Carl von Ossietzky University of Oldenburg
- Dresden University of Applied Sciences
- Free University of Berlin
- Humboldt University of Berlin
- Protestant University of Applied Sciences North Rhine-Westphalia-Lippe
- University of Applied Sciences Mittelhessen
- University of Cologne
- University of Mannheim
- University of Passau
- University of Regensburg
- Heidelberg University

**Services for Deaf Students:**

The following five German universities offer services related to sign language translation and support for deaf students:

- Bielefeld University: Offers resources to support students and staff with disabilities or chronic illnesses. The Central Contact Point for Accessibility (ZAB) is the primary office for accessibility matters and the active participation of people with disabilities at the university. The ZAB provides confidential counseling to students, assists employees in creating accessible work materials, and advises faculty on implementing accessible courses. Additionally, the university offers German Sign Language (DGS) courses. For example, the "Gebärdensprachkurs A1 (S)" is aimed at hearing individuals who want to learn or familiarize



themselves with DGS, and it is taught by a deaf instructor. For more information on accessibility at Bielefeld University, visit their official website: [www.uni-bielefeld.de](http://www.uni-bielefeld.de).

- Humboldt University of Berlin: The Department of Deaf Studies and Sign Language Interpreting at the Institute of Rehabilitation Sciences offers bachelor's and master's degree programs in this field. More information can be found at:
  - Bachelor's program in Deaf Studies: [hu-berlin.de](http://hu-berlin.de)
  - Master's program in Sign Language Interpreting: [reha.hu-berlin.de](http://reha.hu-berlin.de)
- University of Hamburg: Through the Institute for German Sign Language and Communication of the Deaf (IDGS), the university provides interpreting services and conducts research on German Sign Language. More details can be found at: IDGS main page: [idgs.uni-hamburg.de](http://idgs.uni-hamburg.de)
- University of Cologne: Provides interpretation services for people with hearing disabilities, facilitating their participation in academic activities. For more information, visit: Inclusion Services at the University of Cologne: [upsrj.edu.mx](http://upsrj.edu.mx)
- Magdeburg-Stendal University of Applied Sciences: Offers programs in International Communication and Translation, specializing in English and German, including training in sign language interpreting. Details can be found at: Bachelor's program in International Technical Communication and Translation: [educations.es](http://educations.es)



## Appendix IV – Austrian mapping

16 universities/universities of applied sciences have replied to the questionnaire. In the following table the universities/universities of applied sciences are reported with the number of students with deafness actually enrolled:

Name of the University or University of applied sciences	Number of deaf students / Number of hard-of-hearing students
<b>Leopold Franzens Universität Innsbruck</b>	1 / 10
<b>Universität für Weiterbildung Krems</b>	No statistics
<b>Johannes Kepler Universität Linz</b>	0 / 2
<b>Universität Graz</b>	4 known / no number known
<b>mdw-Universität für Musik und darstellende Kunst Wien</b>	0 / 1 known
<b>Technische Universität Graz (Service centre GESTU-Graz)</b>	2 / 3 known
<b>Technische Universität Wien</b>	1 / 2 known
<b>Wirtschaftsuniversität Wien</b>	unknown / unknown
<b>FHWien der WKW</b>	0 / 0
<b>FH Technikum Wien</b>	0 / unknown
<b>Medizinische Universität Innsbruck</b>	No answer / no answer
<b>Privatuniversität Schloss Seeburg</b>	0 / 0
<b>MCI   Die Unternehmerische Hochschule®</b>	Currently 0 / currently 1
<b>Fachhochschule Wiener Neustadt</b>	0 / 0
<b>Pädagogische Hochschule Niederösterreich</b>	0 / 2
<b>Musik und Kunst Privatuniversität der Stadt Wien</b>	Currently 0 / unknown

### Enrolment phase

The main services reported by the universities/universities of applied sciences are as follows:

- promotion of their offers and counselling before and after first contact
- information about enrolment is available online, videos are captioned
- counselling about all the offers of the university, referral to service centre *GESTU-Wien* for deaf students



- students turn to the service centre *GESTU-Graz*, where they get all manners of support measures. The offer covers sign language interpreters, speech-to-text interpreters, note-takers, technical aids, captioning, etc. All students have sign language interpreters at their disposal.
- admission procedure: organisation of sign language interpreters, adaptation of examination modalities, self-assessment centre (online)
- technical aids: Roger Pen (author's note: a special microphone), induction loop, depending on the individual requirements... support according to their wishes, individual support for students with a cochlear implant
- individual counselling and support by the equal opportunities working group
- contact person for people with disabilities and chronic illnesses to search for individual solutions
- inclusion officer, study department and legal department provide support

In addition, by searching on the internet we found the following report based on a survey from spring 2019:

*Zaussinger, Sarah/Kulhanek, Andrea/Terzieva, Berta/Unger, Martin (December 2020). Zur Situation behinderter, chronisch kranker und gesundheitlich beeinträchtigter Studierender. Quantitativer Teil der Zusatzstudie zur Studierenden-Sozialerhebung 2019. 101 p. Online: <https://irihs.ihs.ac.at/id/eprint/5603/> [Accessed on Oct. 15, 2024].*

### **In-itinere services**

In this macro-area, we have considered both services for Lectures and Exams and services for attending Erasmus+ Mobility.

#### *Lectures and exams*

The services reported by the universities/universities of applied sciences are as follows:

- always individual support
- providing sign language interpreters
- individual offers (except for providing sign language interpreters, as this is not foreseen in the budget)
- Project *GESTU-Graz* ("*Gehörlos erfolgreich Studieren*" = Successful as a Deaf Student) supports all students at higher education institutions during the whole course of their studies by providing sign language interpreters, speech-to-text interpreters and captioning of videos
- counselling with regard to adaptations of exam modalities and communication with lecturers as well as support for the teaching staff in these matters



- sign language interpreters, text-to-speech interpreters, adaptation of lectures, adaptation of exam modalities (time extension, sign language interpretation), note-takers, technical aids, captioning of lectures
- exams/presentations: individual adaptation of exam modalities, e.g. written instead of oral; *GESTU-Wien*: organisation of sign language/speech-to-text interpretation, organisation of tutors (note-taking, learning support, ...), providing wireless microphones, recording lectures (LectureTube), induction loops in lecture halls/seminar rooms
- in accordance with the individual requirements of the students, e.g.: during oral exams, providing the questions in written form as well (e.g. via chat in MS Teams or alternatives during exams in presence); if necessary, written exams instead of oral ones as long as contents and requirements are not compromised; time extension of 25% during oral exams
- support through *GESTU-Wien*, adaptation of exam environment/settings
- technical aids: Roger Pen (author's note: a special microphone), induction loop, depending on the individual requirements... support according to their wishes, individual support for students with a cochlear implant
- individual counselling and support by the equal opportunities working group
- if required, adaptation of exam method and individual curricula (CU)

### *Erasmus+ Mobility*

One university of applied sciences did not mention any services. The services reported by the other 15 universities/universities of applied sciences are as follows:

- always individual support
- providing sign language interpreters (German/English)
- promotion of their offers and counselling before and after first contact
- sign language or speech-to-text interpretation during counselling or application processing through *GESTU-Graz*
- Together with the experts from the International Office we highlight the increased financial support
- The International Office provides sign language interpretation; Erasmus has a special budget for that; Erasmus students who come to Vienna will get assistance from *GESTU-Wien* (financing of sign language interpreters provided by Erasmus)
- Team BeAble in cooperation with the International Office of the *Wirtschaftsuniversität Wien (WU)*



- technical aids: Roger Pen (author's note: a special microphone), induction loop, depending on the individual requirements... support according to their wishes, individual support for students with a cochlear implant

### **Job Placement**

One university of applied sciences did not mention any services. The services reported by the other 15 universities/universities of applied sciences are as follows:

- always individual support
- applicants with disabilities can always contact the confident for employees with disabilities. Upon request, a sign language interpreter will be present.
- promotion of their offers and counselling before and after first contact
- sign language or speech-to-text interpretation provided via *GESTU-Graz* for offers of the Uni-Career-Center
- we provide information about career opportunities, organise information events and forward job offers
- career centre offering talents programme for all students, assistance during application process
- cooperation with myAbility
- technical aids: Roger Pen (author's note: a special microphone), induction loop, depending on the individual requirements... support according to their wishes, individual support for students with a cochlear implant
- individual counselling and support by the equal opportunities working group
- assistance through our Career Center

### **Research Projects**

In addition to the services offered to deaf and/or hard-of-hearing students, we sought to identify current research projects or other interesting initiatives promoting the inclusion of d/Deaf students in Austrian Higher Education. 10 out of 16 universities/universities of applied sciences did not mention any projects; one institution reported that projects are under development.

The reported current projects/initiatives include:

- JKU Linz used to cooperate within the initiative *GesTU* ("Deaf Studying") that ended because of a transfer of responsibility for *GesTU* to the administration/rectorate of the *Technische Universität Wien (TU)* and the end of *Integriert Studieren* ("Integrative Studying") at the *Technische Universität Wien (TU)*;



- the *Technische Universität Graz* introduced a pilot project, namely the service point *GESTU-Graz* ("*Gehörlos erfolgreich Studieren*" = Successful as a Deaf Student);
- the university of applied sciences *Technikum Wien* names the project "Barrier-free Design for Teaching and Learning" (BERTL). According to the information mentioned on the homepage, the project aims to further the awareness of barriers in teaching, to highlight barriers and to reduce or avoid them altogether when developing new lectures, thereby setting new standards for Universal Design and Design for All. The first step is an analysis of the current situation at the *FH Technikum Wien*, especially with regard to lectures on Life Science Engineering and Computer Science. They will also analyse the needs of different user groups (people with disabilities and chronic illnesses as well as people with different life circumstances). Advocacy groups and partners from the industrial sector will be included in the BERTL advisory board that will provide advice to the project. Based on this analysis, a BERTL simulation lab and a BERTL toolbox will be designed. These will give the staff the opportunity to experience lectures and their contents from the viewpoint of the Peer Group (i.e. visual, hearing or motor disabilities). Lecturers can test their own lectures for barriers and design them barrier-free with the aid of the tools and guidelines, assisted by a Best Practice examples and example lectures. Simultaneously, the project results (e.g. the simulated environment) will be used in teaching. The students will understand what Barrier-free Design means and develop their own solutions, using the toolbox. Furthermore, an internal (for the *FH Technikum Wien* itself) and external (for lecturers at Austrian universities of applied sciences) further education programme will be created. Some parts of the project, e.g. the BERTL simulation lab, will be made accessible to the public.

Sources for information:

- <https://www.technikum-wien.at/forschungsprojekte/bertl-barrierfree-design-for-teaching-and-learning/>
- <https://forschung.w3.cs.technikum-wien.at/index.php/bertl-home>
- [https://forschung.w3.cs.technikum-wien.at/images/Project\\_BERTL/Universal\\_design\\_for\\_learning\\_as\\_a\\_basis\\_for\\_curriculum\\_development\\_verkl.pdf](https://forschung.w3.cs.technikum-wien.at/images/Project_BERTL/Universal_design_for_learning_as_a_basis_for_curriculum_development_verkl.pdf)
- the *Pädagogische Hochschule Niederösterreich – PH NÖ* (teacher training college Lower Austria) lists
  - a master thesis focusing on communication support for children and adolescents with visual and hearing disabilities;



- a research project that deals with the status quo and perspectives for giving children and adolescents access to Austrian Sign Language in the south of Lower Austria (BR 5 & BR 6), including master theses
- web accessibility for the *Fokus Hören* (focus hearing)
- follow-up project of the poster-award-winning project at *Forum Inklusion 2021: Ein Blick auf digitale Barrierefreiheit an Hochschulen (Fokus Hören & Sehen)*
- equal opportunities for further education formats: Accessibility via speech-to-text interpreters and shared expertise using the example of the university course IT System Support (diversity, media education).



## Appendix V – Spanish mapping

From the survey provided to numerous universities, seven universities replied to the questionnaire, most of them from the south of Spain (5/7). The following table indicates the universities that replied with the number of students with deafness actually enrolled:

Name of the University	Number of deaf students
University of Cordoba	1
University of Cádiz	1
University of Granada	23
University of Sevilla	29 students, 9 males and 20 females.
University of Murcia	8
Universitat Rovira i Virgili	3
University of Almería	10

### Enrolment phase

The universities report a wide range of services that support students with hearing loss and auditory disabilities already at the admission phase:

- Pre-admission Counseling and Promotion: universities actively promote their services and inclusion policies through information events, institutional websites, and specific counseling services available to prospective students and their families. Several universities have a range of services for inquiries regarding admission procedures.
- Online Accessible Information: enrolment procedures and degree information are made accessible online. Several universities ensure that promotional videos and virtual campus tours include captions and subtitles for accessibility.
- Dedicated Inclusion Units within Universities: all institutions have internal Inclusion Units responsible for coordinating services for students with disabilities. These units are the first contact point for personalized support and adaptation planning, and help before the enrolling via providing manuals or videos regarding the tools available.
- Sign Language Interpreting Services (ILSE): The universities provide sign language interpreters for academic activities, practical sessions, and university events, ensuring full participation for students with hearing disabilities.



- Evaluation of Individual Needs: upon enrolment, students undergo individual needs assessments resulting in detailed reports specifying necessary accommodations.
- One institution provides a specific tool focus on Inclusive Learning and Research Facilities (CRAI). The Learning and Research Resource Center (CRAI) offers accessible spaces, specialized equipment, adapted technological tools, and a collection of educational resources tailored for students with special needs. CRAI's unit La Factoría has developed various accessibility guides, including instructions for subtitling YouTube videos.

### *Admission Procedure Adaptations*

For entry exams or interviews, adaptations may include:

- Provision of sign language interpreters (ILSE)
- Extended time for assessments
- Visual or written formats for oral components
- Use of speech-to-text services during interviews when needed
- Assistive Technologies Available
- Depending on the individual's specific needs, universities offer:
- FM portable systems
- Bluetooth Microphones (similar to Roger Pen technology)
- Portable induction loops
- Digital stethoscopes (specifically in health science degrees)

### *Individual Case Management*

Each student is assigned a dedicated contact person within the Inclusion Unit, ensuring ongoing individualized support. In addition, by searching on the internet we found the following report based on a survey from the Foundation CASER in collaboration with the University of Salamanca based on disabilities and access to services in universities and other public environments in 2022:

*Huete García A. La nueva encuesta de discapacidad-dependencia en España: una explicación breve de la EDAD2020. Sección Especial [Internet]. Universidad de Salamanca. Online: [https://www.fundacioncaser.org/sites/default/files/adjuntos/fundacion\\_caser\\_revista\\_actas\\_n31\\_encuesta.pdf?utm\\_source=chatgpt.com](https://www.fundacioncaser.org/sites/default/files/adjuntos/fundacion_caser_revista_actas_n31_encuesta.pdf?utm_source=chatgpt.com)*



## **In-itinere services**

In this macro-area, we have considered both services for Lectures and Exams and services for attending Erasmus+ Mobility.

### *Lectures and exams*

During the academic phase, universities apply highly individualized accommodation plans that remain active throughout the students' academic years. Following a formal assessment, each student receives a tailored adaptation report detailing specific measures to be applied during teaching and evaluation activities. Such report is provided to the teaching staff and administrators if required for any process. Sign language interpretation is widely available, complemented by speech-to-text transcription services that provide real-time captioning during lectures and examinations. Audiovisual materials are routinely subtitled, and professors receive guidance on adapting teaching materials following Universal Design for Learning (UDL) principles. Adaptations to examination formats are standard practice:

- *Classroom and teaching adaptation:*
  - Advance provision of lecture materials via platforms such as Moodle.
  - Visual structuring of content (conceptual maps, clear outlines).
  - Use of visual cues and written reinforcement on whiteboards.
  - Faculty training on Universal Design for Learning (UDL) principles.
  - Preferential seating arrangements for lip-reading optimization.
  - Use of wireless microphones to ensure sound clarity.
- *Exam*
  - Extended exam time (+33% standard)
  - Provision of exam instructions in written form
  - Simplification of language in assessment materials
  - Written exams replacing oral assessments when necessary
  - Reduced environmental noise and smaller rooms during exams

As part of their inclusive teaching environments, all the universities offer various technical equipment available for loan to students with hearing disabilities. These resources include FM systems, portable



induction loops, Bluetooth microphones, tablets connected to real-time captioning services, and specific support tools for cochlear implant users. Additionally, Digital Accessibility Units play a key role in supporting faculty members by assisting them in the creation of fully accessible digital content, advising on the development of inclusive learning materials, and overseeing the implementation of institutional accessibility protocols.

### *Erasmus+ Mobility*

One university of applied sciences did not mention any services. The services reported by the other seven universities as follows:

- Reserved accommodations and academic adaptations: Students with hearing disabilities benefit from reserved places for scholarships or enrollment, as well as individualized guidance throughout their studies. Academic accommodations include adapted assessment procedures, extended exam time, provision of sign language interpretation, and accessible learning formats.
- Financial assistance and mobility support: Students receive counseling on available scholarships, mobility grants, welcome programs, and adaptation procedures. Under Erasmus+ programs, students with disabilities may qualify as participants with fewer opportunities, allowing access to additional financial support to cover extra costs such as personal assistance, medical treatment, or adapted transport. Eligibility requires official recognition of disability or health conditions in line with national and European regulations.
- Technical aids: Universities provide a range of assistive technologies adapted to students' needs, including sign language interpreters, virtual support platforms, portable FM systems, induction loops, and specialized devices.
- Mobility services: International mobility offices coordinate with Inclusion Units to ensure that both outgoing and incoming mobility students receive the necessary support and accommodations. For outgoing students, academic adaptation reports are shared with host institutions to ensure continuity of support abroad.
- International cooperation: Several universities participate in European projects promoting inclusive internationalization, ensuring that all students, regardless of disability or personal circumstances, can fully benefit from mobility experiences and develop intercultural skills.



- Academic accessibility support: Dedicated units assist faculty in creating accessible digital content, developing inclusive learning materials, and implementing institutional accessibility protocols.

These units support faculty members in creating fully accessible digital content, advise on the design of accessible learning materials, and oversee institutional accessibility protocols.

### **Job Placement**

The services reported by the seven universities are as follows:

- Personalized Career Guidance and Counseling: Students receive individual support in job searching strategies, career planning, and preparation for the labor market, including specific advice on navigating the application process for students with disabilities. These centers were defined inside the universities, by the name of Inclusion Units.
- Collaboration with Specialized Employment Centers: The universities maintain close collaboration with specialized employment organizations such as Inserta Empleo (ONCE Foundation), Provincial Associations of Deaf Persons (e.g., Asociación Provincial de Personas Sordas de Córdoba), and other regional agencies like Andalucía Orienta to ensure specialized support and resources.
- Work Placement and Internship Services: Dedicated employment offices coordinate both curricular and extracurricular internships. Particular emphasis is placed on the ONCE-CRUE Foundation Program, which provides paid internship opportunities specifically aimed at university students with disabilities.
- Job Offers and Inclusive Employers Network: Job offers are published through institutional employment portals, allowing all candidates to apply directly. When employers indicate specific requirements or offer positions for candidates with disabilities, applications are managed in collaboration with expert organizations.
- Assessment Adaptations and Support: For students who require it, the universities offer adaptations in evaluation procedures, including sign language interpretation (LSE), to ensure equitable access both during academic assessments and throughout employment selection processes. Additionally, the ONCE provides a national support for students with specific requirements independently of the geographic area for the duration of the studies.



- **Employment Preparation Workshops:** Workshops are regularly organized to enhance key employment skills such as interview techniques, CV writing, and workplace adaptation strategies.
- **Ongoing Monitoring During Work Placements:** Throughout internships or job placements, disability services units provide continuous support and, where necessary, ensure that reasonable accommodations are implemented to facilitate full participation. These comprehensive services are coordinated by the respective Career Services (e.g., Servicio de Empleo, COIE), in collaboration with disability support units, ensuring that students with disabilities are fully supported throughout their transition to the labor market.

### **Research Projects**

In addition to the services offered to deaf and/or hard-of-hearing students, we sought to identify current research projects or other interesting initiatives promoting the inclusion of d/Deaf students in Spanish Higher Education. Six out of seven universities mention participation in projects.

Universities demonstrate commitment to advancing scientific knowledge on hearing disabilities and inclusion in higher education. Notable projects include:

- Storytelling and linguistic normalization, good educational practices in supporting deaf students at the University of Cádiz, development of writing skills among deaf individuals, development of oral expression and sign language: "seeing to hear..."
- At the University of Seville (IdUS), numerous research projects and academic works related to hearing disability can be found in the Research Repository of the <https://idus.us.es/search?spc.page=1&query=discapacidad%20auditiva>
- One university has established a project based on digital Accessibility Unit of the Educational Resources Service has established a cooperation agreement with ACAPPS (the Association of Families and Individuals with Deafness). The project focuses on to develop, implement, and improve a training program that promotes the educational inclusion of deaf students in higher education. As part of this collaboration, the URV has made a range of technical resources available to students with hearing disabilities to facilitate their full participation in classes and practical sessions. In coordination with the Educational Resources Service, the Diversity Support Service, and the Office for Equality and Social Commitment, several assistive devices have been tested, particularly with a student from the Nursing program. The university has tested assistive technologies to support students with hearing loss, including magnetic loop systems that enhance sound transmission to hearing aids or cochlear implants



by reducing background noise. Both fixed and portable systems have been acquired. A digital stethoscope has also been tested for nursing students, converting body sounds into electronic signals for better analysis and accessibility. These devices, once validated, will be available for students and staff, with potential pilot projects planned for their broader implementation.

- Another of the universities works in collaboration with other organizations in these projects (<https://cibis.ual.es/index.php/unidades-funcionales/unidad-de-neurodesarrollo>), mainly through the CiBiS Neurodevelopment Unit (CTS-001 Group):
  - *Development of Executive Functions in Deaf and Hearing Children*: This project explores the development of executive functions – such as attention, working memory, inhibition, and emotional regulation – in children aged 6–12, comparing deaf and hearing groups.
  - *Reading Difficulties in Deaf Children from a Cognitive Neuroscience Perspective*: investigating neural-cognitive underpinnings of reading challenges in deaf children, this work applies neuroscience methods to enhance understanding and inform tailored educational programs.
  - *Influence of Auditory Deprivation on Cognitive Neurodevelopment* :Examining how early hearing loss shapes brain structure and cognitive capacities, this project uses neuroimaging and developmental assessments.
  - *Language Programs for Children with Difficulties and Perspective-Taking*: this initiative develops interventions targeting both linguistic ability and perspective-taking (Theory of Mind) in children with language challenges.
  - *The Role of Language and Cognition in Complex Processes*: Perspective-Taking, Symbolic Relations, and Analogies: Investigating how complex cognitive skills, including analogy and symbolic reasoning, evolve in interaction with language abilities, especially concerning hearing-impaired development.
  - *Complex Discriminations, Contingency Sensitivity, and Self-Control Using Say-Do Tasks*: This research evaluates how children learn rules and exhibit self-control, comparing verbal commitments with actual behavior in varied cognitive conditions.
  - *Education and Sociocultural Diversity*: This line of study examines how educational practices can be adapted to better accommodate students from diverse cultural and social backgrounds, including those with hearing impairments.



- *Education and Disability*: Focusing on inclusive education strategies and systemic barriers, this research aims to improve accessibility for students with various disabilities
- *Special Educational Needs*: Addressing identification and intervention methods for students requiring specialized educational support, including those with hearing, cognitive, or learning disorders.
- *Support and Transition Programs for Educational Disability Situations*: This initiative evaluates programs designed to assist students with disabilities during critical educational transitions, such as from primary to higher education, facilitating ongoing support and inclusion.



## Appendix VI – World mapping

Universities worldwide are enhancing their support services to ensure deaf and hard-of-hearing students have equitable access to higher education. Below is an overview of specific universities across various countries that offer such services:

### United States

- **Gallaudet University:** Located in Washington, D.C., Gallaudet is the only university globally dedicated exclusively to the education of deaf and hard-of-hearing students. It offers a wide range of programs with American Sign Language (ASL) as the primary medium of instruction.
- **Rochester Institute of Technology (RIT) - National Technical Institute for the Deaf (NTID):** NTID provides services such as ASL interpreting, real-time captioning, and specialized tutoring to support deaf and hard-of-hearing students.

### United Kingdom

- **University of Bristol:** This university provides personalized support services, such as British Sign Language (BSL) interpreters and assistive listening devices in classrooms, to ensure accessibility for deaf and hard-of-hearing students.
- **University of Central Lancashire (UCLan):** UCLan offers dedicated support services, including BSL interpreters, communication support workers, and assistive technologies to facilitate learning for deaf and hard-of-hearing students.

### Canada

- **University of British Columbia (UBC):** UBC offers support services such as sign language interpreters, captioning, and assistive listening devices to accommodate deaf and hard-of-hearing students.

### Australia

- **Griffith University:** Griffith provides a Deaf Student Support Program that includes Auslan (Australian Sign Language) interpreters, note-taking services, and assistive technologies to ensure an inclusive learning environment.

### South Africa

- **University of Cape Town:** Offers disability services that include sign language interpretation and assistive listening devices to support deaf and hard-of-hearing students.



- **Stellenbosch University:** Provides comprehensive support for students with disabilities, including those who are deaf or hard-of-hearing, through services like sign language interpretation and assistive technologies.

## Egypt

- **Alexandria University:** Offers accommodations such as note-taking assistance and assistive listening devices for deaf and hard-of-hearing students.

## China

- **Beijing Union University:** The Special Education College offers programs tailored for deaf and hard-of-hearing students, providing sign language interpretation and specialized curricula to support their educational needs.
- **Tianjin University of Technology:** Hosts a College of Special Education that offers programs and support services for deaf and hard-of-hearing students, including sign language interpretation and assistive technologies.

## Japan

- **National University Corporation Tsukuba University of Technology:** Japan's only national university focused on the education of students with special needs, including those who are deaf or hard-of-hearing. It offers programs with sign language support and adapted materials.
- **University of Tsukuba:** Provides resources for deaf and hard-of-hearing students through organizations and offices specializing in disability research, including the Institute of Disability Sciences and the Office for Students with Disabilities.

## South Korea

- **Seoul National University:** Provides support services for students with disabilities, including sign language interpretation and assistive technologies, to ensure accessibility in higher education.