GUIDELINES FOR PREPARING THE FINAL EXAM AND ACHIEVING THE ACADEMIC QUALIFICATION
FINAL EXAM AND ACHIEVEMENT OF THE ACADEMIC DEGREE

Characteristics of the final test and how it is carried out

1. The qualification is awarded upon passing a final test. To take the final test, the student must have acquired all the credits required by the teaching regulations of the CdS in SNM and by student study plan, except those relating to the final test (15 credits).
2. The final exam consists of a power point presentation lasting a maximum of 8 minutes by the student of a compilation or experimental thesis, elaborated in an original way under the guidance of a supervisor and evaluated by the final exam commission. The subject of the thesis work must be relevant to the scientific-disciplinary sectors (SSD) envisaged in the Teaching Regulations of the CdS in SNM. Each thesis is assigned to one or more supervisors. Thesis supervisors are professors who carry out teaching activities in the courses of the FSSN Department. The theses can be supervised by a co-supervisor external to Unical or who does not carry out teaching activities in the CdS of the FSSN Department (External Supervisor), without prejudice to the responsibility of a professor from the FSSN Department, who assumes the function of Internal Supervisor. Any co-supervisors must be indicated by the Supervisor on the thesis request form. If the student does not find an available supervisor, he can submit a request to the Coordinator who will assign him an official supervisor. The student can change the topic of the thesis by submitting a new assignment request. In this case the time period provided for in paragraph 4 begins to run from the new request.
3. Students can opt for an experimental or compilation thesis. The experimental thesis involves the acquisition and processing of scientific data deriving from laboratory or research activities relevant to the SSDs envisaged in the Course Regulations of the Course and can be carried out both in laboratory structures belonging to Unical and in private organizations or companies. The compilation thesis summarizes and elaborates the recent acquisitions of the international scientific literature in particular themes. The compilation thesis must be carried out over a period of no less than 3 months; the experimental thesis over a period of at least 6 months.
4. The student can carry out the thesis research in International Mobility, acquiring 14 credits, among those required for the final exam, for a period of no less than 3 months.
5. The degree thesis is written in Italian. The use of the English language must be authorized by the CCL Coordinator. For students of the 'Nutritional Sciences' curriculum, the final paper and the dissertation must be written in English.
6. The thesis application can be made when the student has acquired 54 ECTS credits in his/her career. The student is required to read the detailed information regarding the relevant obligations on the department website.
7. In order to participate in the graduation session, the student must complete and submit the application for graduation, countersigned by the supervisor and any co-supervisor, to the Student Secretariat Office of the Department only after having taken all the exams of his/her study plan and in any case within 20 days before the start of the graduation session.
8. A copy of the thesis in digital format (PDF/A) signed by the student and countersigned by the Supervisor(s) must be sent within 7 days of the start of the degree session to the student secretariat of the Department for digital archiving.
9. Presentations in ppt format must take place at least 48 hours in advance according to the instructions provided by the President of the CdS.
10. The Commission for evaluating the final exam is appointed by the Director of the Department upon proposal of the CCL Coordinator. The final exam commissions for bachelor's and master's degrees, including single cycle, are made up of at least five members, of whom at least three are professors or researchers belonging to the relevant department of the study course or associated departments and at least three are professors responsible for training activities included in the course of study. For each graduating student, unless there is a justified impediment, at least one of the supervisors is an ex-officio member of the commission.
11. The president of the commission for the evaluation of the final exam is the Department Director or the CCL Coordinator or, in his/her absence, a first-level professor or, in his/her absence, a second-level professor or, in his/her absence, an adjunct professor. The president is responsible for

guaranteeing the full regularity of the test and the adherence of the final evaluations to the criteria established by the Teaching Regulations of the Course.

12. The dissertation of the thesis work and the proclamation are public. In the case of the curriculum in 'Nutritional Sciences', the announcement will take place in both English and Italian.
13. The Graduation Commission evaluates the candidate's final exam. Passing the test allows the acquisition of the CFU necessary to reach the total number of 120 CFU required to obtain the qualification. The Commission evaluates the candidate, taking into account his CV and the performance of the final test; the evaluation of the commission is expressed in one hundred and tenths/one hundred and tenths.
14. The test is considered passed with a minimum grade of 66/110. The Commission may grant honors upon unanimous decision, if the evaluation is higher than 110/110 by at least one whole number.

Method of calculating the final grade

1. The final degree grade is calculated starting from a base score, determined by the exam scores, to which is added a score that considers the presentation and any discussion carried out during the final exam.
2. The base score is determined by the weighted average (expressed in 110-mi) of the votes reported in the verification tests relating to training activities that require a vote, taking as weight the number of credits associated with the individual training activity and attributing the numerical value of 33 exams achieved with honors.
3. The student can request the application of the calculation methods in force in the academic year of obtaining the qualification, if more favourable.
4. For the work and discussion of the experimental theses, the Rapporteur may propose from 0 to 4 points and the Commission from 0 to 6 points.
5. For the work and discussion of the compilation theses, the Rapporteur may propose from 0 to 3 points and the Commission from 0 to 3 points.
6. To this score will be added: 1 point in the case of a degree obtained within the normal duration of the study programme, 0.25 points for at least 3 months spent abroad, 0.5 for a period of 6 months and 1 point for a period of 12 months (subject to passing exams, carrying out internship/thesis).
7. The final value is rounded to the nearest whole number, rounding up if the first decimal is greater than or equal to five).

How writing the Thesis (Experimental or Compilation)

General aspects

The division into chapters of a degree thesis essentially depends on the topic addressed by the student. This structure is generally agreed between the student and the supervisor.
Below is an example of a possible division of the thesis work within the thesis.

- Title page;
- Index;
- Chapter 1 – Introductory aspects and state of the art and objectives of the thesis;
- Chapter 2 – (e.g. in Experimental Theses “Methodological Notes”);
- Chapter 3 – (e.g. in Experimental Theses “Results and Discussion”);
- Conclusion: summary of the main results obtained/contents and any theoretical and practical implications;
- Bibliography;
- Appendices (if necessary).

The thesis work must be the result of the original processing of research or literature data.

It is important to remember that when writing your degree thesis:
-quote the thoughts (use the exact words) of another author,
-paraphrase a text by another author,

- insert an idea or material (formulas, graphs, tables, etc.) that comes from the work of another author,

it is necessary

that the source is cited as subsequently indicated to avoid situations of PLAGIARISM.

It is important to underline that the value of a thesis is mainly given by its content, and above all by its original contribution, and certainly not by its length. Wanting to provide a general indication, a thesis should contain a minimum of 40 pages.

Experimental theses involving healthy subjects and/or patients must be conducted taking the following points into consideration:
1. calculation of the size of the sample to be recruited through the "minimum sample size";
2. acquisition of informed consent from the subjects recruited for the use of the data also in aggregate form. This consent will be managed exclusively by the Nutritionist to whom the subjects/patients have turned;
3. statistical data processing.

Any publication of the data requires the opinion of the Ethics Committee.

Typographical indications

Format: A4

Recommended font: Times New Roman, Calibri, or Courier. Use italics, bold or underline only where strictly necessary.

Title size 13

Dimensions of body text and captions, tables and figures/images 12

Preferably use justified texts

Margins:

Above and below 3 cm

Left 3.5 cm

Right 2.5 cm

Line spacing 1.5

Page numbering: insert the function automatically. Preferably place it at the bottom right or centrally.

Footnotes: make arrangements with the Speaker.

Words in languages other than Italian (including Latin) must always be shown in italics as well as the botanical names of plants, microorganisms, etc.

Figures/Graphs/Tables: they can be inserted freely where needed, trying to stay within the margins used for the text and trying not to leave pages with excessive white spaces. If necessary, use the vertical orientation of the tables.

Figures and Tables

The Figures must be numbered in progressive order, the same must be done for the Tables both in the body of the essay and in the dedicated space within the essay. Figures, Graphs and Tables must be accompanied by a caption that briefly describes the content (to be placed in the upper part) and must report the source (in the lower part, if necessary). That is, indicate the units of measurement and the title of the Cartesian axes if they are graphs.

When preparing a figure it is necessary to insert all the explanatory references of the data shown. Each figure must be accompanied by a specific caption/legend.

Example Figure

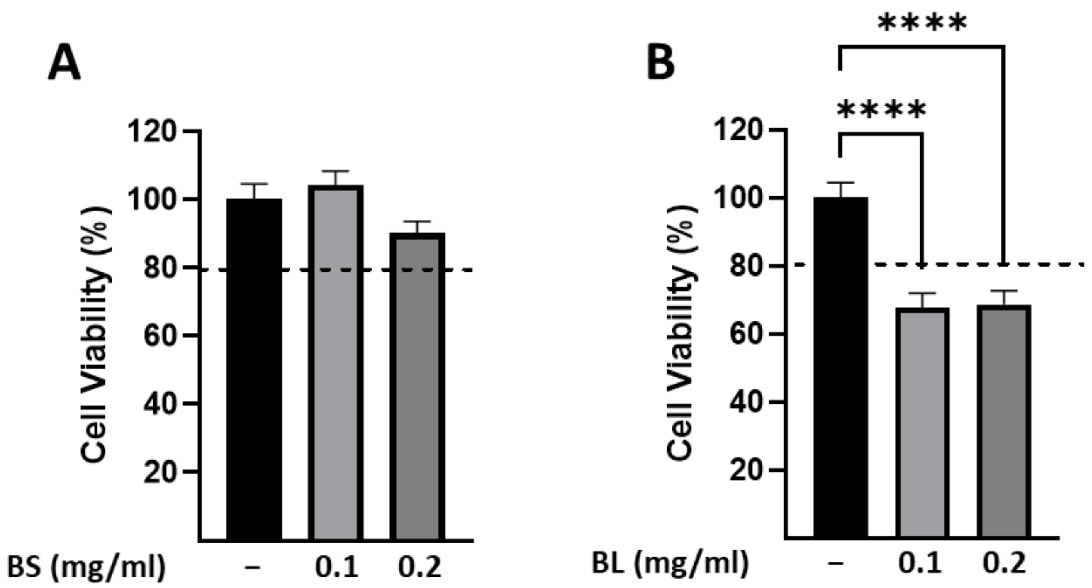

Figure 2. Cell viability assessed by MTT assay in HepG2 cells. HepG2 cells were untreated (−) or treated with 0.1 and 0.2 mg/mL of bamboo sheaths (BS) (**A**) and bamboo leaves (BL) (**B**) for 24 h. The histograms represent the means ± SEM of three independent experiments, each performed in triplicate. **** $p < 0.0001$.

(Bibliographic source: Tundis, R.; Augimeri, G.; Vivacqua, A.; Romeo, R.; Sicari, V.; Bonofiglio, D.; Loizzo, M.R. Anti-Inflammatory and Antioxidant Effects of Leaves and Sheath from Bamboo (*Phyllostacys edulis* J. Houz). *Antioxidants* **2023**, *12*, 1239. https://doi.org/10.3390/antiox12061239)

Example Figure

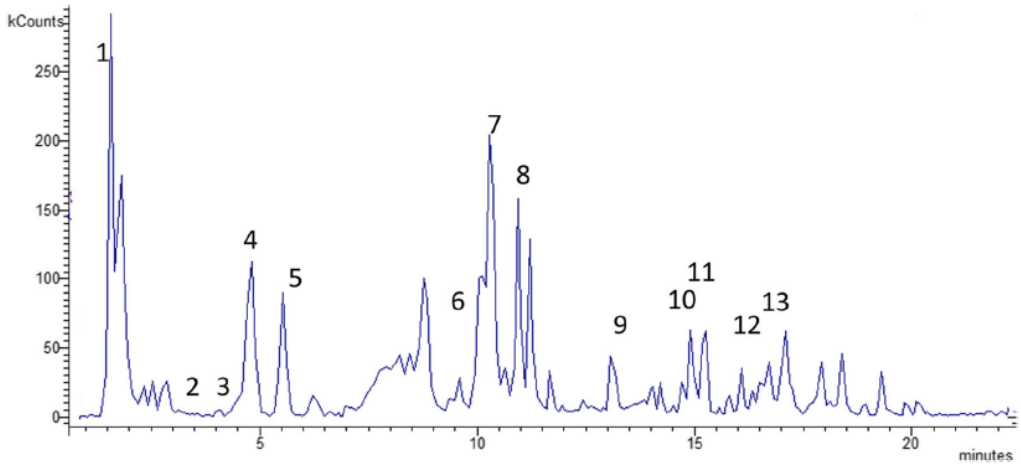

Fig. 1 HPLC-ESI-MS^n identified compounds in *A. commutatum* bulbs extract. 1. γ-glutamil-*S*-methyl cysteine; 2. γ-glutammil S trans propenil cysteine; 3. Allicin; 4. γ-glutammil (*S*)-allil-cysteine; 5. Methoxy quercetin trisaccharide; 6. Alliin; 7. Apigenin diglycoside; 8. Cycloalliin; 9. Quercetin; 10. Luteolin; 11. Methoxy quercetin isomer 1; 12. Methoxy quercetin isomer 2; Methoxy quercetin isomer 3

(Bibliographic source: Loizzo, M.R., Tundis, R., Sut, S. et al. High-Performance Liquid Chromatography/Electrospray Ionization Tandem Mass Spectrometry (HPLC-ESI-MSn) Analysis and Bioactivity Useful for Prevention of "Diabesity" of Allium commutatum Guss. Plant Foods Hum Nutr 75, 124–130 (2020). https://doi.org/10.1007/s11130-019-00782-2)

Example

Table 3. Antioxidant activity of untreated and UF *C. limon* juice.

Juice	DPPH Test (IC_{50} g/mL)	ABTS Test (IC_{50} g/mL)	FRAP Test [a] (M Fe(II)/g)	RACI Values
	(IC_{50} μg/mL)	(IC_{50} μg/mL)	(μM Fe(II)/g)	
Untreated	40.3 ± 1.0 *	46.5 ± 1.2 *	49.7 ± 2.8 *	0.06
J1	42.1 ± 1.3 *	51.3 ± 1.6 *	52.7 ± 2.0 *	0.68
J2	41.2 ± 4.0 *	39.7 ± 1.1 *	49.8 ± 1.6 *	−0.09
J3	35.2 ± 1.0 *	37.3 ± 1.4 *	48.9 ± 1.5 *	−0.66
Ascorbic acid	5.0 ± 0.8	1.7 ± 0.9		
BHT			63.2 ± 4.3	

DPPH: 2,2-diphenyl-1-picrylhydrazyl; ABTS: 2,2′-azino-bis(3-ethylbenzothiazoline-6-sulphonic acid); FRAP: Ferric Reducing Ability Power; RACI: Relative Antioxidant Capacity Index. Data are given as media ± S.D. (n = 3); [a] at 2.5 mg/mL. Ascorbic acid and BHT are used as positive controls. Differences within and between groups were evaluated by one-way analysis of variance test followed by a multicomparison Dunnett's test: * $p < 0.01$ compared with the positive control.

(Bibliographic source: Loizzo MR, Sicari V, Tundis R, Leporini M, Falco T, Calabrò V. The Influence of Ultrafiltration of *Citrus limon* L. Burm. cv Femminello Comune Juice on Its Chemical Composition and Antioxidant and Hypoglycemic Properties. Antioxidants (Basel). 2019 Jan 16;8(1):23. doi: 10.3390/antiox8010023)

Example Table

Table 4. Metabolites identified in **PF**, **PC**, and **PD** extracts.

n	R_t (min)	Compound	Molecular Formula	Error (ppm)	$[M-H]^-$ (m/z)	(-)HRMS/MS	$[M+H]^+$ (m/z)	(+)HRMS/MS	PF	PC	PD
1	1.72	Hexose sugar alcohol	$C_6H_{14}O_6$	0.34	181.0708	163.0601 ($C_6H_{11}O_5$), 101.0231 ($C_4H_5O_3$), 89.0231 ($C_3H_5O_3$), 71.0125 ($C_3H_3O_2$), 59.0126 ($C_2H_3O_2$)			√√	√√	√√
2	1.79	Quinic acid	$C_7H_{12}O_6$	0.71	191.0551	173.0445 ($C_7H_9O_5$), 127.0389 ($C_6H_7O_3$), 111.0440 ($C_6H_7O_2$), 93.0333 (C_6H_5O), 85.0282 ($C_4H_5O_2$)			√√	√√	√√
3	1.82	(Hexosyl sugar alcohol)-malic acid	$C_{10}H_{18}O_{10}$	0.32	297.0823	181.0708 ($C_6H_{13}O_6$), 133.0131 ($C_4H_5O_5$), 115.0024 ($C_4H_3O_4$), 101.0231 ($C_4H_5O_3$), 89.0231 ($C_3H_5O_3$), 71.0125 ($C_3H_3O_2$), 59.0125 ($C_2H_3O_2$)	321.0793 $[M+Na]^+$	205.0687 ($C_6H_{14}O_6Na$), 187.0582 ($C_6H_{12}O_5Na$), 157.0111 ($C_4H_6O_5Na$)	√√	√√	√√
4	1.85	Ketohexosyl-malic acid	$C_{10}H_{16}O_{10}$	-0.81	295.0669	179.0553 ($C_6H_{11}O_6$), 133.0130 ($C_4H_5O_5$), 101.0231 ($C_4H_5O_3$), 89.0231 ($C_3H_5O_3$), 71.0125 ($C_3H_3O_2$), 59.0125 ($C_2H_3O_2$)	319.0633 $[M+Na]^+$	301.0535 ($C_{10}H_{14}O_9Na$), 259.0432 ($C_8H_{12}O_8Na$), 229.0321 ($C_7H_{10}O_7Na$), 203.0530 ($C_6H_{12}O_6Na$), 185.0424 ($C_6H_{10}O_5Na$), 157.0110 ($C_4H_6O_5Na$)	√√	√√	√√
5	2.61	Citric acid	$C_6H_8O_7$	2.15	191.0190	111.0075 ($C_5H_3O_3$), 87.0074 ($C_3H_3O_3$)			√√	√√	√√
6	7.63	3-(*cis*)-*O*-caffeoylquinic acid	$C_{16}H_{18}O_9$	3.87	353.0881	191.0553 ($C_7H_{11}O_6$), 179.0340 ($C_9H_7O_4$),			√√	√√	√

135.0440
($C_8H_7O_2$)

(Bibliographic source: Sottile, F.; Napolitano, A.; Badalamenti, N.; Bruno, M.; Tundis, R.; Loizzo, M.R.; Piacente, S. A New Bloody Pulp Selection of Myrobalan (*Prunus cerasifera* L.): Pomological Traits, Chemical Composition, and Nutraceutical Properties. *Foods* **2023**, *12*, 1107. https://doi.org/10.3390/foods12051107)

Bibliographical references and citations

The bibliography is the list of all the sources (books, articles, etc.) consulted during the writing of the thesis which must obviously be cited in the thesis itself. The publications listed in the bibliography must ONLY be those consulted for the preparation of the thesis and must be referenced in the text at the point where reference is made using the citation methods subsequently proposed. Furthermore, all publications cited in the text must be present in the bibliographical references.

METHOD OF INSERTING INTO THE TEXT

Example

In the text

a) Cholinesterases constitute a superfamily of proteins whose common structural factor is an α, β hydrolase conformation (Greig et al., 2001).

or

b) Cholinesterases constitute a superfamily of proteins whose common structural factor is an α, β hydrolase conformation [4].

In the list of bibliographical references (Bibliography)

a) The reference must be indicated by reporting the list in alphabetical order of all the surnames of the authors cited in the text.

Evans DA, Funkenstein HH, Albert MS, Scherr PA, Cook NR, Chown MJ. Prevalence of Alzheimer's disease in a community population of older persons. *JAMA* **1989**, *262*, 2551-2556. https://doi.org/10.1234/0355700036117012

Greig NH, Utsuki T, Yu QS. A new therapeutic target in Alzheimer's disease treatment: attention to butyrylcholinesterase. *Curr Med Res Opin* **2001**, *17*, 159-165. https://doi.org/10.1185/0300799039117057

Hasinoff BB. Kinetics of acetylthiocholine binding to electric eel acetylcholinesterase in glycerol/water solvents of increased viscosity. Evidence for a diffusion-controlled reaction. *Biochim Biophys Acta* **1982**, *704*: 52-58. https://doi.org/10.1016/0167-4838(82)90131-5

Kristofikofà Z, Benesovà O, Tejkalovà H. Changes of high affinity coline uptake in the hippocampus of old rats after long-term administration of two nootropic drugs (tacrine and Ginkgo biloba extract). *Dementia **1992**, 3*, 304:307. https://doi.org/10.1159/000107030

In this case the references are reported in numerical order:

[1] Hasinoff BB. Kinetics of acetylthiocholine binding to electric eel acetylcholinesterase in glycerol/water solvents of increased viscosity. Evidence for a diffusion-controlled reaction. *Biochim Biophys Acta* **1982**, *704*: 52-58. https://doi.org/10.1016/0167-4838(82)90131-5

[2] Evans DA, Funkenstein HH, Albert MS, Scherr PA, Cook NR, Chown MJ. Prevalence of Alzheimer's disease in a community population of older persons. *JAMA* **1989**, *262*, 2551-2556. older persons. *JAMA* **1989**, *262*, 2551-2556. https

[3] Kristofikofà Z, Benesovà O, Tejkalovà H. Changes of high affinity coline uptake in the hippocampus of old rats after long-term administration of two nootropic drugs (tacrine and Ginkgo biloba extract). *Dementia **1992**, 3*, 304:307. https://doi.org/10.1159/000107030

[4] Greig NH, Utsuki T, Yu QS. A new therapeutic target in Alzheimer's disease treatment: attention to butyrylcholinesterase. *Curr Med Res Opin* **2001**, *17*, 159-165. https://doi.org/10.1185/0300799039117057

METHOD OF WRITING REFERENCES

- Book

Author(s). *Title in italics, Publisher, Place of publication, pages, YEAR*

Kline, P. *Manuale di Psicometria*, Astrolabio, Roma, **1996**

- Book chapter

Author(s). In *Book title in italics; Author(s) of the book (ed.); Publishing house, Place of publication, Volume and chapter indication, chapter pages, YEAR*

Winstein S, Henderson RB. In *Heterocyclic Compounds*; Elderfield, R.C., Ed.; Wiley: New York, NY, USA, Vol. 1, Chapter 1, pp. 60-65, **1980**

- Research paper

Author(s). Title of the article, Title of the journal in italics (abbreviated or in full), YEAR, volume, pages of the article, doi:prefix/suffix

Díaz, D.D.; Converso, A.; Sharpless, K.B.; Finn, M.G. 2,6-Dichloro-9-thiabicyclo[3.3.1]nonane: Multigram Display of Azide and Cyanide Components on a Versatile Scaffold. *Molecules* **2006**, *11*, 212–218, https://doi.org/:10.3390/11040212

Further ways of indicating the references of articles in journals can be:

Loizzo, M.R.; Tundis, R.; Leporini, M.; D'Urso, G.; Gagliano Candela, R.; Falco, T.; Piacente, S.; Bruno, M.; Sottile, F. Almond (*Prunus dulcis* cv. Casteltermini) Skin Confectionery By-Products: New Opportunity for the Development of a Functional Blackberry (*Rubus ulmifolius* Schott) Jam. *Antioxidants* **2021**, *10*, 1218. https://doi.org/10.3390/antiox10081218

Loizzo MR, Tundis R, Leporini M, D'Urso G, Gagliano Candela R, Falco T, Piacente S, Bruno M, Sottile F. Almond (*Prunus dulcis* cv. Casteltermini) Skin Confectionery By-Products: New Opportunity for the Development of a Functional Blackberry (*Rubus ulmifolius* Schott) Jam. *Antioxidants*. 2021; 10(8):1218. https://doi.org/10.3390/antiox10081218

Loizzo, Monica R., Rosa Tundis, Mariarosaria Leporini, Gilda D'Urso, Rossella Gagliano Candela, Tiziana Falco, Sonia Piacente, Maurizio Bruno, and Francesco Sottile. 2021. "Almond (*Prunus dulcis* cv. Casteltermini) Skin Confectionery By-Products: New Opportunity for the Development of a Functional Blackberry (*Rubus ulmifolius* Schott) Jam" *Antioxidants* 10, no. 8: 1218. https://doi.org/10.3390/antiox10081218

- *Meetings*

Author(s). Job title. Congress title, place, date, YEAR, pages.

Chum O, Philbin J, Zisserman, A. Near duplicate image detection: Min-Hash and tf-idf weighting. In Proceedings of the 19th British Machine Vision Conference (BMVC 2008), Leeds, UK, 1–4 September **2008**, pp. 812–815.

- Consultation of websites and documents/data downloaded from them

Always report the name of the institution to which the site refers, the date and, if appropriate, the time of consultation.

FAO, Food Security Statistics, Gambia, in FAO – Food and Agriculture Organization of the United Nations, www.fao.org/es/ess/faostat/foodsecurity/Countries/EN/Gambia_e.pdf consultato il 20 Novembre **2022**, ore 15.30