ÇUKUROVA UNIVERSITY

INSTITUTE OF NATURAL AND APPLIED SCIENCES

MSc / PhD THESIS

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| **Institute of Natural and Applied Sciences Thesis Writing Rules and Template** |

**Name SURNAME**

*Biotechnology Department*

January, 2022

**ÇUKUROVA UNIVERSITY**

**INSTITUTE OF NATURAL AND APPLIED SCIENCES**

**MSc / PhD THESIS APPROVAL**

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| **Institute of Natural and Applied Sciences Thesis Writing Rules and Template** |

**Name SURNAME**

***Biotechnology Department***

This Master's / Doctorate Thesis was evaluated by the following Jury Members on xx/xx/xxxx and was approved by unanimity / majority of votes.

Jury : Prof. Dr. Name SURNAME (Advisor) …………

: Prof. Dr. Name SURNAME …………

: Assoc. Prof. Dr. Name SURNAME …………

: Assoc. Prof. Dr. Name SURNAME …………

: Asst. Prof. Dr. Name SURNAME …………

**This Thesis was written in the Department of Biotechnology, Institute of Natural and Applied Sciences.**

**Thesis Number:**

**Prof. Dr. Sadık DİNÇER**

**Director**

**Institute of Natural and Applied Sciences**

**This work was supported by the XXXXX.**

**Project ID: XXX-XXXX-XXXX**

**Note:** The usage of the presented specific declarations, tables, figures, and photographs either in this thesis or in any other reference without citation is subject to "The law of Arts and Intellectual Products" number of 5846 of Turkish Republic

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**CUKUROVA UNIVERSITY**

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**MSc / PhD THESIS**

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| **Institute of Natural and Applied Sciences**  **Thesis Writing Rules and Template Editing** |

**Name SURNAME**

***Advisor: Prof. Dr. Name SURNAME***

***Co-Advisor: Prof. Dr. Name SURNAME***

***Department of Biotechnology***

# ABSTRACT

This section should summarize why and how the research was conducted, what was achieved as a result, should be written with 1 (one) line spacing and should not exceed 1 (one) page. Times New Roman 11pt. ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++.

**Keywords**: Natural Sciences, Institute, Thesis, Format.

**ÇUKUROVA ÜNİVERSİTESİ**

**FEN BİLİMLERİ ENSTİTÜSÜ**

**YÜKSEK LİSANS / DOKTORA TEZİ**

|  |
| --- |
| **Fen Bilimleri Enstitüsü Tez Yazım Kuralları ve Şablon Düzenlenmesi** |

**Adı SOYADI**

***Danışman: Prof. Dr. Adı SOYADI***

***İkinci Danışman: Prof. Dr. Adı SOYADI***

***Biyoteknoloji Anabilim Dalı***

# ÖZ

In this section, the English Abstract should be written in Turkish. It should be written with 1 (one) line spacing and should not exceed 1 (one) page. ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++.

**Anahtar Kelimeler**: Fen Bilimleri, Enstitü, Tez, Format.

# GENİŞLETİLMİŞ ÖZET

Extended abstract should be written in Turkish with Times New Roman, 11 pt, a minimum of 3 pages and a maximum of 5 pages.

# ACKNOWLEDGEMENTS

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Maecenas porttitor congue massa. Fusce posuere, magna sed pulvinar ultricies, purus lectus malesuada libero, sit amet commodo magna eros quis urna. Nunc viverra imperdiet enim. Fusce est. Vivamus a tellus. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Proin pharetra nonummy pede. Mauris et orci. Aenean nec lorem. In porttitor. Donec laoreet nonummy augue. Suspendisse dui purus, scelerisque at, vulputate vitae, pretium mattis, nunc. Mauris eget neque at sem venenatis eleifend. Ut nonummy. Proin pharetra nonummy pede. Mauris et orci. Aenean nec lorem. In porttitor. Donec laoreet nonummy augue. Suspendisse dui purus, scelerisque at, vulputate vitae, pretium mattis, nunc. Mauris eget neque at sem venenatis eleifend. Ut nonummy.

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# SYMBOLS AND ABBREVIATIONS

|  |  |  |
| --- | --- | --- |
| APU | : | Auxiliary Power Unit |
| AFC | : | Alkali Fuel Cell |
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**THESIS MAIN SECTIONS**

**1. INTRODUCTION**

In this section, the purpose of the research, the reasons for studying this subject, the general condition of the material, the current value of the subject and some information that will help the subject to be easily understood should be included. In the last part of this section, the purpose of the study should be clearly stated.

**2. PRELIMINARY WORK**

This is the section where the contents of the studies related to the thesis subject are included.

**3. MATERIAL AND METHOD (or similar)**

All the characteristics of the material used, the place where the sample was taken, the way it was taken, the changes it underwent, and its status from the beginning to the end of the research should be explained. As a method, the methods applied during the research should be reported, and any changes made in the method should be explained. However, if a special and new method is used, it should be written in detail.

**4. RESULTS AND DISCUSSIONS (or similar)**

All findings and details related to the subject should be given clearly under this title. A comparison and discussion of results from research with results obtained by others on the same topic should be made. All findings and details related to the subject should be given clearly under this title. The results of the studies on the same subject should be compared and discussed with the findings obtained from the research.

**5. CONCLUSIONS**

In this section, information, values and their interpretation should be given regularly, indicating to what extent the objectives stated in the last part of the introduction have been achieved. In order to emphasize enough and to ensure clarity in the expression, it would be appropriate to give the results in items. Suggestions can be made to new researchers for future studies on the subject.

**REFERENCES**

**CURRICULUM VITAE**

**APPENDICES**

# 1. FORMAT AND CONTENT

## Format

In the writing of the theses to be prepared, preferably 80-90 grams of white A4 size (210x297mm) paper should be used. Standard cardboard covers prepared by the institute should be used in theses. The cover of the thesis should include the name of the Institute, the name of the thesis, MSc or PhD thesis, the name of the department where the study was conducted, the name of the person who made the study and the year of the thesis was completed. In addition, the thesis type, year and the name and surname of the thesis author should be written on the bookback of the cover of the thesis (Example: PhD Thesis - Year - Name SURNAME).

Inside the cover, there should be a second inner cover with the same content. The page following the inner cover should be used for the acceptance and approval of the thesis jury and should be signed after the thesis is accepted.

In the theses, the text should be written in "Times New Roman" character, with 11 font size, on both sides. The paragraph should be in the range of 1 (one) tab (1.25 cm) from the left, the page layout should be 2.5 cm from the top edge, 2.5 cm from the bottom edge, 2 cm from the right edge and 3.5 cm from the left edge.

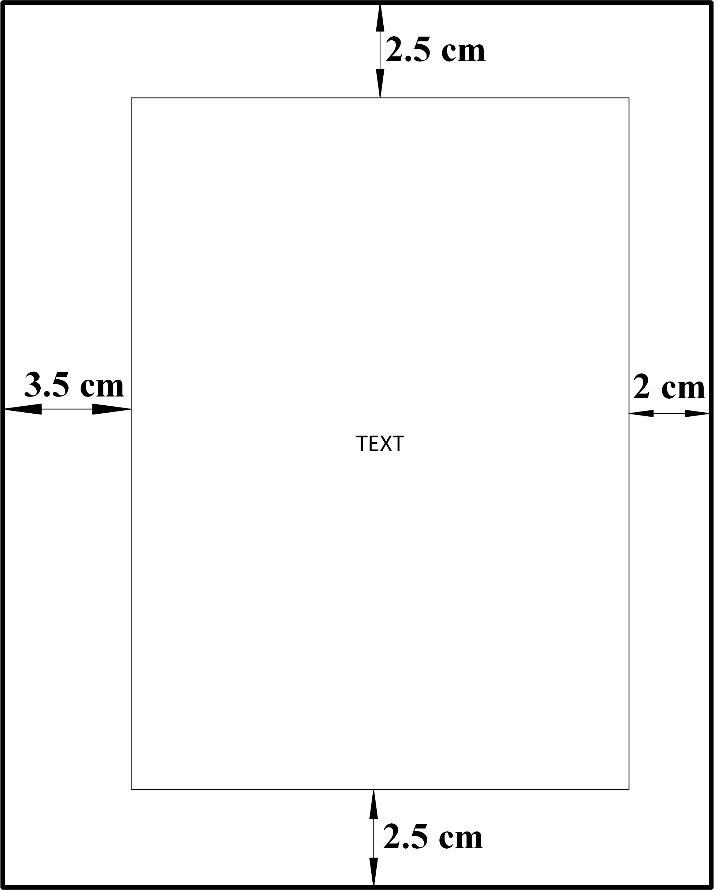


Figure 1.1. Thesis Page Layout

Thesis front pages such as Contents, Abstract, Öz, Genişletişmiş Özet, Acknowledgments, List of Tables, List of Figures, Symbols and Abbreviations are written in capital Roman numerals as "I, II, III, IV, V …"; the thesis text that starts with the INTRODUCTION section should be numbered as "1, 2, 3, ...". Page numbers should be written in the middle of the bottom of the page, 1.5 cm above the bottom edge of the page and in 11 font size. All pages should be numbered except the thesis inner cover and thesis approval page. Characters such as separators and dashes should not be used before and after the page numbers.

1.5 line spacing should be used in the main text. 1 (one) line spacing should be used in the explanations of figures and tables, quotations and footnotes.

No spacing should be left between paragraphs in the text. Equations should be editable in equation editors and should not be in picture format. In addition, equations should start on a new line with 1 tab (1.25 cm) space from the left and should be numbered on the basis of the main part, aligned to the right at the end of the equation line. The equations in chapter 3 of a sample thesis are shown below.

 (3.1)

 (3.2)

Main chapters should always start on a new page. Chapter numbering in theses will be done with the "decimal system" and a dot (.) should be used after each number. Fourth level headings should be unnumbered and in "italics".

Header usage examples are presented below.

**1. INTRODUCTION**

**1.1. Unmanned Air Vehicle**

**1.1.1. UAV Concept**

**1.1.2. UAV History**

*Developments in the World*

*Developments in Turkey*

**1.2. Power Systems in UAVs**

Headings should be set to start from the line margin in the thesis. All letters of the main section headings and the first letter of each word of the sub-headings should be capitalized. One line space should be left after the main section headings, and the text should be continued without leaving any space after the other headings. There should be a maximum of 3 (three) level headings in the table of contents, as shown in Figure 1.2, and page numbers should be aligned to the right.

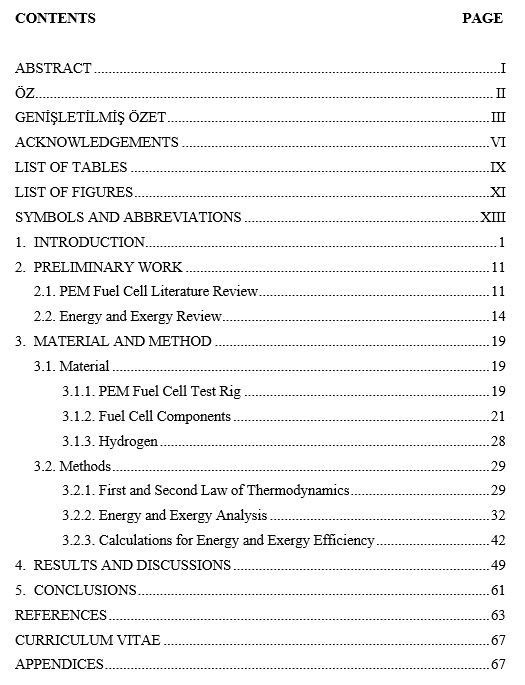


Figure 1.2. Example of contents

## Content

The thesis should be written in an easy-to-understand, appropriate, scientific and educational language. Expression should be passive in third person; short and concise sentences should be used.

\*\*\*In graduate programs where the language of instruction is Turkish, theses can be written in ENGLISH, provided that an extended Turkish abstract is given (Genişletilmiş Özet) with the reasoned opinion of the advisor, the Decision of the Department Board, and the approval of the Institute Administrative Board. Extended abstract should be written in Times New Roman, 11 pt, with a minimum of 3 pages and a maximum of 5 pages. It should be given after the English and Turkish Abstracts and before the Acknowledgments section.

Tables and Figures should be placed on the first mentioned page in the text or at the beginning of the next page. They should not be placed in the middle of the sentence; the sentence should not be divided. There should be a line space between them and the thesis text. The spaces required to be left on the margins of the page should never be exceeded when placing them. Those that cannot fit within the page margins should either be reduced or presented in the Appendix.

Figures and table numbers should be made according to the main section, figure captions should be written at the bottom of the figure. On the other hand, table captions should be written at the top of the table, aligned to the left, in 11 pt Times New Roman. There should be no spaces between them and the table. The texts in figures, tables and graphics should be written in “Times New Roman” character and with 11 pt. If there are many figural parts such as graphics, tables, or figures larger than A4 under a title, these should be included in the Appendix. An example table is given below.

Table 1.1. World boron reserves (Karaca, 2008)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Country** | **Detected Reserve (million tons)** | **Possible Reserve**  **(million tons)** | **Ratio in total (%)** | **Sufficiency**  **(year)** |
| Turkey | 224 | 375 | 64 | 389 |
| USA | 40 | 40 | 9 | 55 |
| Kazakhstan | 14 | 1 | 2 | 10 |
| Russia | 40 | 60 | 11 | 69 |
| China | 27 | 9 | 4 | 25 |
| Others | 18 | 73 | 10 | 62 |

In case of quoting from another source in the Figures and Tables used in the thesis, the source must be cited appropriately. Do not put a dot (.) at the end of the explanation. In addition, "International System of Units (SI)" must be followed in writing the thesis.

As in the example of the thesis writing plan given in Figure 1.3, the thesis is created on the condition that the subject integrity is adhered to between the introduction and the conclusion.

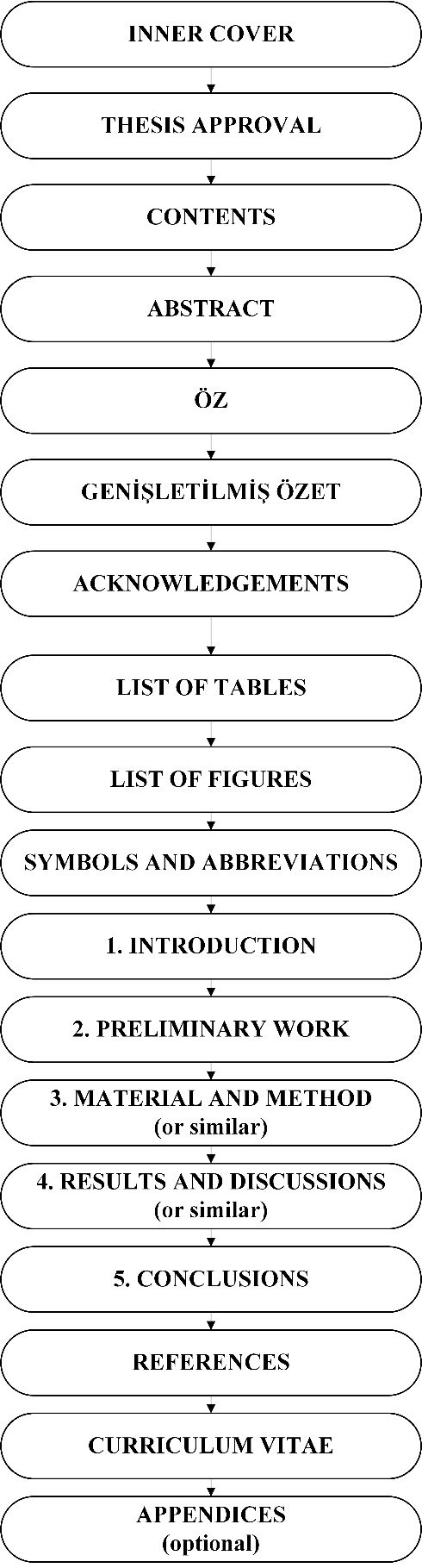


Figure 1.3. Thesis Writing Plan

# REFERENCES

In this section, it is explained how the references used in theses written in English will be shown in the text and in the bibliography.

## Citation in the Main Text

Citations in the main text should be given in the form of author-date. The initials of the surnames should be capitalized, and a comma should be used before the year in the references to be shown in parentheses. For references with three or more authors, "et al" should be included after the surname of the main author of the study. If it is necessary to show studies by several authors in a row, there should be a semicolon after the dates.

Some examples are shown below.

* In this study, fuel properties, engine performance and emission characteristics of diesel fuel, biodiesel and their mixtures with butanol were evaluated **(Akar, 2016).**
* In another study, a hybrid propulsion system with a new PMS unit was designed for mini UAVs **(Keiyinci and Aydin, 2021)**.
* Pollutant emissions and climate change arising from the use of fossil fuels are the leading concerns faced by humans in recent years **(Nayak et al., 2022; Hoang and Pham, 2021)**.
* **Muradov (2017)** analyzed the current state of existing and emerging technological options and solutions to drastically reduce the amount of CO2 emissions from fossil fuel-based hydrogen production plants.
* **Voitic and Hacker (2016)** conducted a literature review on hydrogen production with chemical cycling technology.
* **Bilgili et al (2018)** reviewed the development of hydroelectric facilities both worldwide and in Turkey, as well as the period from 2007 to 2016 of the global installed hydropower capacities.

If an author has more than one publication in the same year, in this case, lowercase letters should be used next to the year as indicated below.

* Today, 95% of hydrogen is produced from fossil fuels **(Keiyinci, 2021a; Keiyinci, 2021b).** Studies on hydrogen production from renewable energy sources proceed **(Keiyinci, 2021c)**.

## Bibliography

References should be written in alphabetical order according to the surname of the main author in the references used. The first line should be normal (without indentation), while the bottom lines should start after 0.85 cm space. The publications of the same author(s) in different years should be given in chronological order. The publications of the same author(s) in the same year should be given as a, b, c..... just after the publication year.

### Reference to a journal publication

The general template should be as follows.

It should be shown as "Author's surname, initials, year, article title, name of the journal, volume and issue of the journal (the number should be given in parentheses) and the beginning and end pages of the study". The “doi” number can be added optionally after the page number. Some examples are given below.

**Example 1:** Akar, M. A., 2016. Performance and Emission Characteristics of Compression Ignition Engine Operating with False Flax Biodiesel and Butanol Blends. Advances in Mechanical Engineering, 8(2):1–7.

**Example 2:** Velazquez, A. A., and Dodds, P. E., 2020. Green hydrogen characterisation initiatives: Definitions, standards, guarantees of origin, and challenges. Energy Policy, 138(1): 111-119.

**Example 3:** Karagöz, Y., Sandalcı, T., Yüksek, L., and Dalkılıç, A. S., 2015. Engine performance and emission effects of diesel burns enriched by hydrogen on different engine loads. International Journal of Hydrogen Energy, 40(20): 6702-6713.

### Reference to a book

It should be in the form of "Author's surname, initials, year, name of the book, publisher, place of publication and total number of pages". An example is given below.

**Example:** Anderson, J., 2005. Introduction to Flight. McGraw-Hill, New York, 814s.

### Reference to conference proceeding

It should be shown as "Author's surname, initials, year, title of the paper, name of the paper, name of the congress, city and country where the congress was held".

**Example 1:** Verstraete, D., Cazzato, L., and Romeo, G., 2012. Preliminary Design of a Fuel-Cell-Based Hybrid-Electrical UAV. 28th International Congress of the Aeronautical Sciences, Brisbane, Australia.

**Example 2:** Paper, C., Universidade, P.G., and Interior, B., 2015. Long Endurance Electric UAV for Civilian Surveillance Missions. 29th Congress of the International Council of the Aeronautical Sciences, St. Petesburg, Russia.

### Reference to a thesis

It should be shown as “Author's surname, initials, year, name of the thesis, type of thesis, university where the thesis was published, city where the thesis was published, number of pages”.

**Example:** Bağcı, U., 2014. Kızıldağ ve Tekirova ofiyolitlerinin jeokimyası ve petrolojisi. PhD Thesis, Çukurova University, Adana, p. 220.

### Reference to a web page

If the author of the source used on the relevant web page is known, it should be shown as in the example below.

**Example:** Shakespeare, W., 1623. Antony and Cleopatra. http://www.shakespeareonline.com/quotes/antonyquotes.html [accessed: 01.06.2017].

If the author of the web page is not known;

**Example:** Anonymous 1: https://www.ntsb.gov/investigations/data [accessed: 01.06.2021].

### Other instructions about references

Every citation given in the text must be included in the references section of the thesis. For personal initiatives (oral or written) made under mandatory conditions, the first letter(s) and surname(s) of the person or persons interviewed should be written in capital letters and indicated as a footnote in the text. Oral and written interviews should not be included in the references section.

Unpublished studies and review reports should also be included in the references section, just like other publications. If the source is an unpublished report, thesis or lecture note, the word "unpublished" should be added in parentheses after the information is given in the usual order.

If there are citations from the studies in press, the date should not be placed after the author's name, the word "in press", the name of the source, the place of publication, and the volume number, if known, should be written in parentheses.

# REFERENCES

Akar, M. A., 2016. Performance and Emission Characteristics of Compression Ignition Engine Operating with False Flax Biodiesel and Butanol Blends. Advances in Mechanical Engineering, 8(2):1–7.

Bağcı, U., 2014. Kızıldağ ve Tekirova ofiyolitlerinin jeokimyası ve petrolojisi. Doktora tezi, Çukurova University, Adana, p. 220.

Keiyinci, S., and Aydin, K., 2021. Ground simulation of fuel cell/battery hybrid propulsion system for small unmanned air vehicles. Aircraft Engineering and Aerospace Technology, 93(5), 783–793.

Paper, C., Universidade, P. G., and Interior, B., 2015. Long Endurance Electric UAV for Civilian Surveillance Missions. 29th Congress of the International Council of the Aeronautical Sciences, St. Petesburg, Russia.

Shakespeare, W., 1623. Antony and Cleopatra. http://www.shakespeareonline.com/quotes/antonyquotes.html [accessed: 01.06.2017].

Velazquez, A. A., and Dodds, P. E., 2020. Green hydrogen characterisation initiatives: Definitions, standards, guarantees of origin, and challenges. Energy Policy, 138(1): 111-119.

Verstraete, D., Cazzato, L., and Romeo, G., 2012. Preliminary Design of a Fuel-Cell-Based Hybrid-Electrical UAV. 28th International Congress of the Aeronautical Sciences, Brisbane, Australia.

# CURRICULUM VITAE

The CV will be written as one paragraph.

# APPENDICES

**Appendices**

This section begins vertically in the middle of the page with the heading “APPENDICES”. If annexes are referenced in the text (e.g. Appendix A, Appendix B), the information about these appendices is listed, starting from a separate page. Measurement tools, institutional permits, contracts, supporting documents, tables, figures, maps, photographs, etc. information and documents can be given as an appendix. Each appendix is named with a first-degree title and presented on the new page (Example: Appendix A. Questionnaire Form, Appendix B. School Permit Letter).