****

UNIVERSITY “ISA BOLETINI” MITROVICA

**KEY PERFORMANCE INDICATORS**

**FACULTY OF MECHANICAL AND COMPUTER ENGINEERING**

**Deans word**

Dear all,

The Faculty of Mechanical and Computer Engineering (FMCE) is one of the largest faculties of University “Isa Boletini" in Mitrovica. As Dean of FMCE, I am extremely proud of the rich tradition of providing an experience-based engineering education that our faculty has upheld since its inception. Our engineering programs, recently including the field of economics, prepare our students to become leaders with the moral depth and intellectual intensity needed to meet the challenges and demands of Industrial Revolution 4.0.

FMCE through its programs aims to develop computer science and engineering and manufacturing machinery professionals who will be able to work and address domestic and international industry challenges by creatively applying knowledge and communicating effectively as well as required continuous improvement of skills and professional growth. In recent years, FMCE has started offering the multidisciplinary economic engineering program at both the bachelor and master levels that will prepare professionals to face the demands of the rapidly growing domestic and international industry by integrating and applying complex knowledge, skills and values ​​of economic theories, management of economic processes and economic engineering. We are currently in the process of accrediting programs at the master's level for manufacturing machinery and computer science and engineering.

In the center to the success of our students at FMCE have been the decades of leadership and experience-based knowledge that our staff brings to the learning process.

I would like to cordially invite all those who are interested in expanding their knowledge and developing careers in engineering fields to come to FMCE to further explore our faculty and be amazed by the opportunities offered by our curricula, our professional staff, selected literature and our modern infrastructure.

Thank you!

Dean

Prof. Dr. Hakif Zeqiri

Contents

[INTRODUCTION 5](#_Toc118755878)

[1. Teaching and learning 6](#_Toc118755879)

[2. Quality development 9](#_Toc118755882)

[3. Scientific Research 11](#_Toc118755883)

[4. Service to the community/society 15](#_Toc118755889)

[5. International cooperation 16](#_Toc118755893)

[6. University environment 17](#_Toc118755895)

[7. Finance and Administration 19](#_Toc118755901)

[8. Human resources 20](#_Toc118755902)

[9. UIBM promotion 21](#_Toc118755903)

**List of abbreviations**

CCQAA Central Commission for Quality Assurance and Assessment

SPUIBM Strategic Plan of the University “Isa Boletini” in Mitrovica

KPI Key Performance Indicators

UIBM University “Isa Boletini” in Mitrovica

# INTRODUCTION

*Success is not a list of 'shiny' words, tables and figures.*

*Success is about the contribution of everyone who wants the institution where they work to be excellent.*

**What are key performance indicators?** Higher education key performance indicators are measurable values used by academic unit programs to measure and track their progress toward specific objectives. Furthermore, these performance indicators help monitor and assess how well these programs and academic units are performing and facilitate the setting of their goals.

Key performance indicators are one of many tools that help answer a very important question: how do we know what we have achieved by answering the following questions:

* Where are we compared to the aims, goals and objectives defined?

**What was the methodology of developing key performance indicators for UIBM** The Central Commission for Quality Assurance Assessment, during the drafting of this document, relied on the UIBM documents, such as the Temporary Statute, the strategic plan, the set of regulations and other supporting materials, as well as on several models of performance indicators from prestigious universities.

In the Strategic Plan of the University of Mitrovica, a critical element in the successful achievement of the defined goals and objectives has been the successful identification and measurement of Key Performance Indicators (KPI).

The package of performance indicators is completed every year and activities aimed at further improvement and development of specific indicators are planned based on the results.

The Strategic Plan of UIBM 2018-2021, as well as the Strategic Plans of each academic unit within UIBM, has defined seven main objectives as the basis on which the academic units aim to achieve the mission. In order to fulfil these objectives, a number of key performance indicators have been identified which we will present below.

**KEY PERFORMANCE INDICATORS** **AT FACULTY OF MECHANICAL AND COMPUTING ENGINEERING**

# Teaching and learning

* 1. **The ratio of applicants to the number of students who are admitted for each study program**
     1. The ratio between applicants for each study program with the number of students admitted for the last three years.

In the 2019/2020 academic year, the teaching process at the Faculty of Mechanical and Computer Engineering (FMCE) has been conducted only with the third year. Non-accreditation at the institutional level made it impossible to register students in the first year at FMCE, even though there was accreditation for the Banking, Finance and Accounting specialization in the framework of the Business and Management program for the Bachelor's level. Regarding the number of applicants, the number of registrants as well as the ratio between applications and admissions for the academic year 2020/2021 and 2021/2022 are presented in the Table 1.

**Table 1.** The number of applicants, the number of registrants and the ratio between applications and admissions for the academic year 2020/2021 and 2021/2022

|  |  |  |  |
| --- | --- | --- | --- |
| **Academic year** | **The number of applicants who applied in the first and second term** | **Number of students planned for admission** | **The ratio between the number of applicants and those admitted** |
| 2020/2021 | 247 | 450 | 0.54 |
| 2021/2022 | 310 | 450 | 0.68 |

* 1. **Academic performance of students**

1.2.1. Average grade divided by years of study and divided by study programs, within the academic unit for the last two years [2018-2019 and 2020-2021].

**Table 2.** The average grade of students for the academic year 2018/2019 and 2020/2021 according to the programs

|  |  |  |
| --- | --- | --- |
| **Academic year** | **Program** | **Average grade** |
| 2020/2021 | Production Engineering BSc  Computer Science and EngineeringBSc  Economy Engineering BSc  Economy EngineeringMSc | 7.32  7.28  7.59  9.70 |
| 2019/2020 | Production Engineering BSc  Computer Science and Engineering BSc  Economy Engineering BSc | 7.23  7.43  7.45 |
| 2018/2019 | Production Engineering BSc  Computer Science and Engineering BSc  Economy Engineering BSc | 7.15  7.27  7.40 |

* 1. **Dropping out of studies**
     1. The number of students who drop out (for academic or non-academic reasons) before completing the study program for the last two years.

**Table 3.** The number of students who drop out of their studies in the academic year 2020/2021 and 2021/2022 in the Faculty of Economics

|  |  |
| --- | --- |
| **Academic year** | **The number of students who drop out of studies** |
| 2020/2021 | 101 |
| 2021/2022 | We can not provide any information |

# Transfer of students from one University to another University

* + 1. The total number of students transferred to the program/department/academic unit for the last two years.

**Table 4.** The number of transferred students in the academic year 2019/2020 and 2020/2021

|  |  |
| --- | --- |
| **Academic year** | **The number of transferred students** |
| 2019/2020 | There is not any |
| 2020/2021 | 2 |

# Graduation of students

* + 1. The ratio of students who graduated in the year compared to the total number of students expected to graduate.

**Table 5.** The ratio of students who graduated in the year compared to the total number of students expected to graduate.

|  |  |
| --- | --- |
| **Academic year** | **[[1]](#footnote-1)** **The number of students who graduated compared to the number of students expected to graduate** |
| 2019/2020 | We can not provide any information |
| 2020/2021 | We can not provide any information |

# Quality development

* 1. There are mechanisms and instruments for quality assurance, development and measurement in the university.
     1. The report of the student evaluation questionnaire on teaching, course and resources at UIBM was conducted twice a year last year and is published on the website. [https://www.UIBM.net/wp-content/uploads/2021/06/Raporti-permbledhes-per-pyetesoret-e-realizuar-me-studentet-Bachelor-Janar-2021.pdf](https://www.umib.net/wp-content/uploads/2021/06/Raporti-permbledhes-per-pyetesoret-e-realizuar-me-studentet-Bachelor-Janar-2021.pdf)
     2. The report of the student evaluation questionnaire for the study program and research work at UIBM for Master's is carried out once a year and is published on the website. [https://www.UIBM.net/wp-content/uploads/2020/12/Raporti-permbledhes-per-pyetesoret-e-realizuar-me-studentet-Master-1.pdf](https://www.umib.net/wp-content/uploads/2020/12/Raporti-permbledhes-per-pyetesoret-e-realizuar-me-studentet-Master-1.pdf)
     3. The report of the self-assessment questionnaire of the academic staff at UIBM is carried out twice a year and is published on the website.

[https://www.UIBM.net/wp-content/uploads/2020/12/Raporti-permbledhes-i-vetevleresimit-te-stafit-akademik.pdf](https://www.umib.net/wp-content/uploads/2020/12/Raporti-permbledhes-i-vetevleresimit-te-stafit-akademik.pdf)

2.1.4. The report of the Deans' self-evaluation questionnaire at UIBM is carried out once a year and is published on the website.

2.1.5. The report of the evaluation questionnaire of the Deans by the academic staff of the UIBM academic units is carried out once a year and is published on the website.

2.1.6. The report of the academic staff evaluation questionnaire by the Dean is carried out once a year and is published on the website.

2.1.7. The report of the evaluation questionnaire of the Deans by the Rector of UIBM is carried out once a year and is published on the website.

2.1.8. The questionnaire report with external stakeholders is carried out once a year and is published on the website.

[https://www.UIBM.net/wp-content/uploads/2020/12/Raport-permbledhes-per-pyetesoret-e-realizuar-me-palet-e-jashtme-te-interesit.pdf](https://www.umib.net/wp-content/uploads/2020/12/Raport-permbledhes-per-pyetesoret-e-realizuar-me-palet-e-jashtme-te-interesit.pdf)

2.1.9. The report of the questionnaire with the graduates/ALUMNI is carried out once a year and is published on the website.

[https://www.UIBM.net/wp-content/uploads/2020/12/Raport-permbledhes-per-pyetesoret-e-realizuar-me-rrjetin-ALUMNI.pdf](https://www.umib.net/wp-content/uploads/2020/12/Raport-permbledhes-per-pyetesoret-e-realizuar-me-rrjetin-ALUMNI.pdf)

2.1.10. The report of the questionnaire with the administrative staff at UIBM is carried out once a year and is published on the website.

2.1.11. The report of the questionnaire with the academic staff at UIBM is carried out once a year and is published on the website.

2.1.12. The questionnaire report for the evaluation of UIBM support services is carried out once a year and is published on the website.

[https://www.UIBM.net/wp-content/uploads/2021/12/Raport-permbledhes-per-vleresimin-e-sherbimeve-mbeshtetese-ne-UIBM-nga-stafi-akademik-dhe-studentet.pdf](https://www.umib.net/wp-content/uploads/2021/12/Raport-permbledhes-per-vleresimin-e-sherbimeve-mbeshtetese-ne-UIBM-nga-stafi-akademik-dhe-studentet.pdf)

2.1.13. The report of Peer to Peer evaluations has been made and published on the website.

2.1.14. Number of meetings of quality assurance coordinators with academic staff

2.1.15. Number of meetings of quality assurance coordinators with students

2.1.16. Number of meetings of quality assurance coordinators with external stakeholders

2.1.17. Number of quality-related trainings for the last two years attended by quality coordinators

|  |  |  |  |
| --- | --- | --- | --- |
| **Description** | **2018/2019** | **2019/2020** | **2020/2021** |
| Number of meetings of quality assurance coordinators with academic staff | 8 | 7 | 8 |
| Number of meetings of quality assurance coordinators with students | 3 | 4 | 5 |
| Number of meetings of quality assurance coordinators with external stakeholders | 2 | 3 | 3 |
| Number of quality-related trainings for the last two years attended by quality coordinators | 1 | 1 | 2 |

# Scientific Research

Within the academic units there are Institutes for Scientific Research.

# Scientific publications

3.1.1. The number of scientific publications for the academic staff for the last two years as first/corresponding author published in scientific journals indexed in Web of Science and Scopus for the academic program/unit.

**Table 8.**The number of scientific publications of the academic staff for the year 2019/2020 and 2020/2021 as first/corresponding author.

|  |  |
| --- | --- |
| **Year** | **Number of publications** |
| 2019 | 3 |
| 2020 | 3 |
| 2021 | 5 |

3.1.2. The number of scientific publications for academic staff for the last two years as co-authors (not second/corresponding authors) published in scientific journals indexed in Web of Science and Scopus for the academic program/unit.

**Table 9.** The number of scientific publications of the academic staff for the year 2019/2020 and 2020/2021 as a non-corresponding author.

|  |  |
| --- | --- |
| **Year** | **Number of publications** |
| 2019 | 1 |
| 2020 | 0 |
| 2021 | 1 |

3.1.3. Number of scientific publications for the academic staff for the last two years as first/corresponding author published in scientific journals indexed outside the Web of Science and Scopus for the program/academic unit.

**Table 10.** Number of scientific publications of the academic staff for the academic year 2019/2020 and 2020/2021 as first/corresponding author in scientific journals indexed outside the Web of Science and Scopus.

|  |  |
| --- | --- |
| **Year** | **Number of publications** |
| 2019 | 2 |
| 2020 | 3 |
| 2021 | 4 |

3.1.4. Number of scientific publications for the academic staff for the last two years as co-authors (not second/corresponding authors) published in scientific journals indexed outside the Web of Science and Scopus for the program/academic unit

**Table 11.** Number of scientific publications of the academic staff for the academic year 2019/2020 and 2020/2021 as a non-correspondent author in scientific journals indexed outside the Web of Science and Scopus.

|  |  |
| --- | --- |
| **Viti** | **Numri i publikimeve** |
| 2019 | 1 |
| 2020 | 0 |
| 2021 | 1 |

3.1.5. The number of monographs published by the academic staff for the last two years

**Table 12.** The number of monographs published by the academic staff for the academic year 2019/2020 and 2020/2021.

|  |  |
| --- | --- |
| **Year** | **Number of monographs** |
| 2020 | 0 |
| 2021 | 0 |

3.1.6. The number of books/dispensations/authorized lectures/summaries published by academic staff for the last two years for the academic program/unit.

**Table 13.** The number of books/dispensations/lectures published by the academic staff for the academic year 2019/2020 and 2020/2021.

|  |  |
| --- | --- |
| **Year** | **Number of books/dispensations/lectures** |
| 2020 | 0 |
| 2021 | 2 |

# Scientific conferences

3.2.1. The number of academic staff participation in international conferences for the last two years for the program/academic unit

**Table 14.** The number of academic staff participation in international conferences for the academic year 2019/2020 and 2020/2021.

|  |  |
| --- | --- |
| **Year** | **Number of academic staff participation** |
| 2020 | 3 |
| 2021 | 2 |

3.2.2. The number of scientific conferences and symposia organized by the program/academic unit for the last two years.

There were no scientific conferences or symposiums organized by the faculty

# Research projects

* + 1. Total number of program/academic unit research projects funded by the university's annual (internal) budget for the last two years.

There was no research project from the program

* + 1. Total number of program/academic unit research projects funded by external agencies through various grants for the last two years.

There has not been any funded project in the last two years.

# Citation of scientific publications

* + 1. The total number of citations of works in journals published for regular academic staff by programs, for the last two years.

# Cooperation with industry

* + 1. The number of meetings with the advisory bodies of the academic units for the last two years.

1. meetings were held

3.5.2 The number of changes offered in programs as a result of the recommendation of external parties for the last two years.

*7 changes were made based on the recommendations*

# Service to the community/society

# 4.1. Membership in boards and commissions outside the University

4.1.1 The number of staff engaged in boards or commissions outside the university for the last two years, divided according to engagement.

|  |  |
| --- | --- |
| **Engagement** | **Number of FMCE staff** |
| University level studies committee | 1 |
| The QAINT project for providing expertise in the drafting of the document for the study areas for the Accreditation Agency of Kosovo | 1 |
| **Total** | **2** |

# 4.2. Media activities

4.2.1 The number of public activities of the university staff such as: public lectures, publications of various articles in the media, various presentations in the media, by faculties for the last three years.

|  |  |
| --- | --- |
| **Description** | **Number of activities** |
| Public activities | 11 |

# 4.3 Participation in public activities outside the University

4.3.1. The number of external visitors to the faculty on the occasion of various activities for the last two years.

The number of external visitors on the occasion of various activities is 1

4.4.4. Data about the participation of university staff in charity or volunteer activities outside the institution.

2

# International cooperation

# 5.1. International official activities

5.1.1 The number of different cooperation agreements of the academic unit with different institutions for the last two years.

*FIEK*

*FIM*

*Fakulteti Ekonomik, UP*

*USAK*

5.1.2. The number of international organizations/institutions in which the Faculty is a member.

It is not affiliated anywhere

**5.2.** General scientific collaborations

5.2.1. This performance indicator includes data within the year about the main activities in which the academic staff are engaged according to the classification below:

- Scientific committees. The number of academic staff divided by Faculties who serve in international scientific, cultural and professional organizations.

3

- International cooperation. The number of activities carried out between Faculties and international institutions and organizations, either individually or as groups.

3

- Joint cooperation. The number of cooperation activities between an academic unit and another institution outside the University.

There is no

- Management positions. The number of academic staff serving on the boards of international cultural and research societies.

There is no

- Editorial boards. The number of academic staff serving on the editorial boards of international scientific journals.

There is no

# University environment

# Staff `s satisfaction

6.2.1. The level of satisfaction of the staff in terms of services and various issues that were investigated through questionnaires

[https://www.UIBM.net/wp-content/uploads/2021/12/Raport-permbledhes-per-vleresimin-e-sherbimeve-mbeshtetese-ne-UIBM-nga-stafi-akademik-dhe-studentet.pdf](https://www.umib.net/wp-content/uploads/2021/12/Raport-permbledhes-per-vleresimin-e-sherbimeve-mbeshtetese-ne-UIBM-nga-stafi-akademik-dhe-studentet.pdf)

* 1. **Students` satisfaction**

6.3.1. The level of students' satisfaction with the services included in the questionnaires about teaching and learning, as well as with the services provided.

[https://www.UIBM.net/wp-content/uploads/2021/12/Raport-permbledhes-per-vleresimin-e-sherbimeve-mbeshtetese-ne-UIBM-nga-stafi-akademik-dhe-studentet.pdf](https://www.umib.net/wp-content/uploads/2021/12/Raport-permbledhes-per-vleresimin-e-sherbimeve-mbeshtetese-ne-UIBM-nga-stafi-akademik-dhe-studentet.pdf)

[https://www.UIBM.net/wp-content/uploads/2021/06/Raporti-permbledhes-per-pyetesoret-e-realizuar-me-studentet-Bachelor-Janar-2021.pdf](https://www.umib.net/wp-content/uploads/2021/06/Raporti-permbledhes-per-pyetesoret-e-realizuar-me-studentet-Bachelor-Janar-2021.pdf)

# 6.4. Skills and qualifications of graduates

6.4.1. This performance indicator shows us how much the studies at our university have helped the students to adapt to the labour market according to the students.

[https://www.UIBM.net/wp-content/uploads/2020/12/Raport-permbledhes-per-pyetesoret-e-realizuar-me-rrjetin-ALUMNI.pdf](https://www.umib.net/wp-content/uploads/2020/12/Raport-permbledhes-per-pyetesoret-e-realizuar-me-rrjetin-ALUMNI.pdf)

6.4.2. This performance indicator shows us how much studies at our university have helped students to adapt to the labour market according to employers.

[https://www.UIBM.net/wp-content/uploads/2020/12/Raport-permbledhes-per-pyetesoret-e-realizuar-me-palet-e-jashtme-te-interesit.pdf](https://www.umib.net/wp-content/uploads/2020/12/Raport-permbledhes-per-pyetesoret-e-realizuar-me-palet-e-jashtme-te-interesit.pdf)

# 6.5. library

6.5.1. The number of book titles in the library for the fields of study in the academic unit.

In the library in the field of Computer Science and Engineering, Production Engineering and Economy Engineering, there are: 1441 copies

.

6.5.2. Number of enrolled students.

The number of students from the Faculty of Economics is between 20-25 students.

# 6.6. laboratory

6.6.1. The number of laboratories and accompanying laboratory equipment within the faculties.

|  |  |  |
| --- | --- | --- |
| **Type** | Number of units | m²/ unit |
| Amphitheater | 2 | 320 |
| Classrooms | 4 | 300 |
| Computer labs | 9 | 700 |
| Electronics labs | 4 | 400 |
| Mechanical labs | 12 | 900 |
| Library | 1 | 400 |
| Administrative offices | 6 | 70 |
| Staff offices | 15 | 210 |
| Total space |  | 3300 |

# 6.7. Technological devices

Through this indicator, we present the number of computers per student, as well as the number of software at the service of academic staff and students.

6.7.1. Number of computers for academic staff as faculty.

6.7.2. Number of computers per student

6.7.3. The number of software at the service of academic staff.

6.7.4. The number of software at the service of students.

|  |  |
| --- | --- |
| **Technological devices** | **Number** |
| Number of computers for academic staff | 30 |
| Number of computers per student | 120 |
| The number of software at the service of academic staff | 1 |
| The number of software at the service of students | 1 |

# Finance and Administration

The efficiency and transparency of the financial and administrative system at the University/Faculty serve as the basis for the smooth running of the process of providing higher education.

7.1 Budget

This performance indicator shows the amount of the Faculty's budget for the last three years, as well as shows the forms of budget distribution.

7.1.1 The amount of the Faculty's budget for the last three years.

It is regulated based on the regulation at the central level of UIBM

7.1.2 The method of budget distribution (Investments, equipment, software, etc.)

Supply of mechanical and computer engineering equipment worth €70,000

# Human resources

* + 1. Number if academic staff by:
* Qualification;
* Gender;
* Academic vocation
* Age

**Table 18.** Number of academic staff by qualification, gender, academic vocation and age as of January, 2022.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Qualification** | | **Age** | | **Academic vocation**  **Age** | | | |
| **Dr.sc** | **Master** | **Male** | **Female** | **Prof.Dr.** | **Prof.Asoc.Dr.** | **Prof.Ass.Dr.** | **Assistants** |
| 13 | 10 | 18 | 5 | 4 | 1 | 8 | 10 |

**Figure 19.** Number of academic staff by age

|  |  |  |
| --- | --- | --- |
| **Gender** | M | F |
| **Number of people** | 18 | 5 |

8.1.2. Number of administrative and support staff according to:

- Qualification;

- Gender;

- Age

**Table 20.** Number of administrative staff according to qualification, gender according to the status of the month of January, 2022.

|  |  |  |  |
| --- | --- | --- | --- |
| **Qualification** | | **Gender** | |
| Faculty |  | Male | Female |
| 10 |  | 4 | 6 |

# UIBM promotion

This performance indicator measures the promotion of the academic unit, divided by category:

|  |  |
| --- | --- |
| **Description** | **Number** |
| The number of friends of the academic unit in social networks | 746 |
| The number of promotional videos of the academic unit | 4 |
| The number of published documents containing positive statistics for academic units | 5 |
| The number of published success stories for current students | 11 111111152968814 |
| The number of success stories for alumni students | 5 |
| The number of activities developed with the student for the last two years | 10 |
| The number of information sessions in the campus | 2 |
| The number of virtual interviews | 3 |
| Revised number of CVs, cover letters, and supporting documents such as portfolios | 11 |
| The number of assistances for students in postgraduate studies and employment | 10 |
| The number of activities organized and coordinated in the service of students | 8 |
| The number of counselling and career guidance sessions | 4 |
| The number of activities that ensure the creation of a welcoming environment that respects students' unique backgrounds, beliefs and goals | 2 |

* 1. The number of friends of the academic unit in social networks
  2. The number of promotional videos of the academic unit
  3. The number of published documents containing positive statistics for academic units.
  4. The number of published success stories for current students.
  5. The number of success stories for alumni students.
  6. The number of activities developed with the student for the last two years.
  7. The number of information sessions in the campus.
  8. The number of virtual interviews.
  9. The revised number of CVs, cover letters, and supporting documents such as portfolios.
  10. The number of assistances for students in postgraduate studies and employment.
  11. The number of activities organized and coordinated in the service of students.
  12. The number of counselling and career guidance sessions
  13. The number of activities that ensure the creation of a welcoming environment that respects students' unique backgrounds, beliefs and goals

Conclusion

For the purposes of improving the quality of higher education institutions, institutions should review and measure key performance indicators on a periodic basis. Even we, as an academic unit, have drawn up the main performance indicators through which we identify our strong points as an institution, but also the areas where we need improvement.

The measurement and reporting of performance indicators for the Faculty of Mechanical and Computer Engineering will serve not only as a tool for improving the quality of higher education provision, but also as a key tool for better strategic management, as well as for increasing transparency. and accountability, ensuring that University "Isa Boletini" in Mitrovica is an institution that fulfills its mission to provide contemporary teaching for the preparation of quality personnel in fields unique to Kosovo, the wider region, dedicated to developing scientific research, professional projects, professional counseling, being at the service of sustainable development and increasing well-being and social advancement.

1. Students who started their studies in the 2020/2021 academic year are planned to graduate at the end of the 2022/2023 academic year, which has not been possible by to present any data at this point. [↑](#footnote-ref-1)