**Quality Associates, Inc.**

Quality Associates, Inc., a consulting firm, advises its clients about sampling and statistical procedures that can be used to control their manufacturing processes. In one particular application, a client gave Quality Associates a sample of 800 observations taken during a time in which that client’s process was operating satisfactorily. The sample standard deviation for these data was 0.21; hence, with so much data, the population standard deviation was assumed to be 0.21. Quality Associates then suggested that random samples of size 30 be taken periodically to monitor the process on an ongoing basis. By analyzing the new samples, the client could quickly learn whether the process was operating satisfactorily. When the process was not operating satisfactorily, corrective action could be taken to eliminate the problem. The design specifications indicated the mean for the process should be 12. The hypothesis test suggested by Quality Associates follows.

质量Associates Inc .)

咨询公司Quality Associates, Inc.就抽样和统计程序向客户提供建议，这些程序可以用来控制他们的生产过程。在一个特殊的应用程序中，一个客户给质量助理一个800个观察样本，在该客户的过程运行令人满意的时间内。这些数据的样本标准差是0。21;因此，在数据如此多的情况下，假设总体标准差为0.21。质量助理随后建议定期抽取30号随机样本，以持续监测整个过程。通过对新样品的分析，客户可以快速了解工艺操作是否令人满意。当过程不能令人满意地运行时，可以采取纠正措施来消除问题。设计规范表明，该工艺的平均值应为12。以下是质量助理提出的假设检验。

*Ho*: μ = 12

*Ha*: μ ≠ 12

Corrective action will be taken any time *Ho* is rejected.

The samples below were collected at hourly intervals during the first day of operation of the new statistical process control procedure.

一旦Ho被拒绝，将采取纠正措施。

在新的统计过程控制程序实施的第一天，每隔一小时收集以下样本。

|  |  |  |  |
| --- | --- | --- | --- |
| **Sample 1** | **Sample 2** | **Sample 3** | **Sample 4** |
| 11.55 | 11.62 | 11.91 | 12.02 |
| 11.62 | 11.69 | 11.36 | 12.02 |
| 11.52 | 11.59 | 11.75 | 12.05 |
| 11.75 | 11.82 | 11.95 | 12.18 |
| 11.90 | 11.97 | 12.14 | 12.11 |
| 11.64 | 11.71 | 11.72 | 12.07 |
| 11.64 | 11.71 | 11.72 | 12.07 |
| 11.80 | 11.87 | 11.61 | 12.05 |
| 12.03 | 12.10 | 11.85 | 11.64 |
| 11.94 | 12.01 | 12.16 | 12.39 |
| 11.92 | 11.99 | 11.91 | 11.65 |
| 12.13 | 12.20 | 12.12 | 12.11 |
| 12.09 | 12.16 | 11.61 | 11.90 |
| 11.93 | 12.00 | 12.21 | 12.22 |
| 12.21 | 12.28 | 11.56 | 11.88 |
| 12.32 | 12.39 | 11.95 | 12.03 |
| 11.93 | 12.00 | 12.01 | 12.35 |
| 11.85 | 11.92 | 12.06 | 12.09 |
| 11.76 | 11.83 | 11.76 | 11.77 |
| 12.16 | 12.23 | 11.82 | 12.20 |
| 11.77 | 11.84 | 12.12 | 11.79 |
| 12.00 | 12.07 | 11.60 | 12.30 |
| 12.04 | 12.11 | 11.95 | 12.27 |
| 11.98 | 12.05 | 11.96 | 12.29 |
| 12.30 | 12.37 | 12.22 | 12.47 |
| 12.18 | 12.25 | 11.75 | 12.03 |
| 11.97 | 12.04 | 11.96 | 12.17 |
| 12.17 | 12.24 | 11.95 | 11.94 |
| 11.85 | 11.92 | 11.89 | 11.97 |
| 12.30 | 12.37 | 11.88 | 12.23 |
| 12.15 | 12.22 | 11.93 | 12.25 |

**Managerial Report**

1. Conduct a hypothesis test for each sample at the 0.01 level of significance and determine what action, if any, should be taken. Provide the test statistic and *p*-value for each test.
2. Compare the standard deviation for each of the four samples. Does the assumption of 0.21 for the population standard deviation appear reasonable?



1. Compute limits for the sample mean around μ = 12 such that, as long as a new sample mean is within those limits, the process will be considered to be operating satisfactorily. If exceeds the upper limit or if is below the lower limit, corrective action will be taken. These limits are referred to as upper and lower control limits for quality control purposes.



1. Discuss the implications of changing the level of significance to a large value. What mistake or error could increase if the level of significance is increased?

管理报告

1.对每一个样本在0.01显著性水平上进行假设检验，并确定如果需要采取什么行动，应该采取什么行动。为每个测试提供测试统计量和p值。

2.比较四个样本的标准差。假设总体标准差为0.21是否合理?

3.计算在liu = 12附近的样本均值的极限，这样，只要一个新的样本均值在这些极限之内，过程将被认为是令人满意的运行。如果超过上限或低于下限，将采取纠正行动。这些极限被称为质量控制的上限和下限控制极限。

4.讨论将显著性水平更改为大值的含义。如果显著性水平提高，哪些错误或错误会增加?

**Socrates and Erasmus**

The Socrates II European program supports cooperation in education in eight areas, from school to higher education, from new technologies, to adult learners. Within Socrates II is the program *Erasmus* that was established in 1987 with the objective to facilitate the mobility of higher education students within European universities. The program is named after the philosopher, theologian, and humanist, Erasmus of Rotterdam (1465 – 1536). Erasmus lived and worked in several parts of Europe in quest of knowledge and experience believing such contacts with different cultures could only furnish a broad knowledge. He left his fortune to the University of Basel and became a precursor of mobility grants.

The Erasmus program has 31 participating countries that include the 25 member states of the European Union, the three European Economic area countries of Iceland, Liechtenstein, and Norway, and the current three candidate countries – Romania, Bulgaria, and Turkey. The program is open to universities for all higher education programs including doctoral courses. In between the academic years 1987 – 1988 to 2003 – 2004 more than 1 million university students had spent an Erasmus period abroad and there are 2,199 higher education institutions participating in the program. The European Union budget for 2000 – 2006 is €950 million of which about €750 million is for student grants. In the academic year 2003 – 2004, the Erasmus students according to their country of origin and their country of study, or host country is given in the cross-classification Table 1 and the field of study for these students according to their home country is given in Table 2. It is the target of the Erasmus program to have a balance in the gender mix and the program administrators felt that the profile for subsequent academic years would be similar to the profile for the academic year 2003 – 2004.

**Required**

A sample of random data for the Erasmus program for the academic year 2005 – 2006 was provided by the registrar’s office and this is given in Table 3. Does this information bear out the program administrator’s belief if this is tested at the 1%, 5%, and 10% significance level for a difference?

**Table 1 Students by field of study 2003-2004 according to home country**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Subject** | **AT** | **BE** | **BG** | **CY** | **CZ** | **DK** | **EE** | **FI** | **FR** | **DE** | **GR** | **HU** | **IS** | **IE** | **IT** | **LV** |
| Agricultural sciences | 37 | 156 | 51 | 0 | 187 | 18 | 6 | 64 | 398 | 181 | 81 | 136 | 3 | 3 | 317 | 14 |
| Architecture, Planning | 128 | 163 | 32 | 0 | 168 | 54 | 12 | 30 | 519 | 762 | 149 | 75 | 0 | 30 | 877 | 9 |
| Art and design | 193 | 209 | 42 | 0 | 182 | 60 | 47 | 326 | 651 | 906 | 143 | 114 | 24 | 90 | 756 | 31 |
| Business studies | 1,117 | 1,089 | 97 | 7 | 584 | 364 | 47 | 1,383 | 6,573 | 5,023 | 306 | 450 | 56 | 593 | 1,963 | 88 |
| Education, Teacher training | 260 | 414 | 12 | 24 | 228 | 74 | 2 | 100 | 320 | 535 | 81 | 126 | 22 | 24 | 267 | 27 |
| Engineering, Technology | 248 | 384 | 133 | 3 | 481 | 112 | 22 | 487 | 2,833 | 1,376 | 143 | 147 | 20 | 52 | 1,545 | 10 |
| Geography, Geology | 32 | 28 | 12 | 0 | 90 | 27 | 9 | 33 | 259 | 433 | 46 | 66 | 3 | 12 | 206 | 14 |
| Humanities | 147 | 105 | 14 | 0 | 148 | 141 | 9 | 136 | 598 | 1,048 | 131 | 64 | 13 | 51 | 1,144 | 13 |
| Languages, Philological sciences | 505 | 603 | 73 | 15 | 464 | 346 | 51 | 316 | 3,321 | 3,528 | 327 | 248 | 47 | 305 | 3,346 | 21 |
| Law | 231 | 357 | 37 | 0 | 185 | 103 | 28 | 117 | 1,449 | 1,474 | 191 | 159 | 7 | 142 | 1,455 | 7 |
| Mathematics, Informatics | 146 | 139 | 86 | 0 | 123 | 20 | 4 | 108 | 570 | 803 | 104 | 64 | 4 | 45 | 392 | 13 |
| Medical sciences | 144 | 349 | 60 | 12 | 222 | 115 | 12 | 291 | 399 | 1,021 | 172 | 125 | 4 | 46 | 1,045 | 8 |
| Natural sciences | 143 | 51 | 33 | 0 | 113 | 33 | 4 | 93 | 843 | 879 | 87 | 29 | 3 | 62 | 453 | 6 |
| Social sciences | 250 | 500 | 48 | 3 | 309 | 171 | 32 | 307 | 1,787 | 2,067 | 343 | 200 | 15 | 210 | 2,220 | 38 |
| Communication and information science | 112 | 212 | 19 | 0 | 14 | 44 | 12 | 100 | 295 | 425 | 38 | 23 | 0 | 32 | 723 | 5 |
| Other areas | 28 | 30 | 2 | 0 | 91 | 4 | 8 | 60 | 166 | 227 | 43 | 32 | 0 | 8 | 120 | 4 |
| Total | 3,721 | 4,789 | 751 | 64 | 3,589 | 1,686 | 305 | 3,951 | 20,981 | 20,688 | 2,385 | 2,058 | 221 | 1,705 | 16,829 | 308 |

**Table 1 (Continued)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Subject** | **LI** | **LT** | **LU** | **MT** | **NL** | **NO** | **PL** | **PT** | **RO** | **SK** | **SI** | **ES** | **SE** | **UK** | **EUI** | **Total** |
| Agricultural sciences | 0 | 48 | 0 | 0 | 80 | 27 | 112 | 69 | 61 | 37 | 23 | 566 | 19 | 23 | 0 | 2,717 |
| Architecture, Planning | 9 | 37 | 4 | 2 | 109 | 19 | 321 | 264 | 64 | 18 | 24 | 854 | 64 | 96 | 0 | 4,893 |
| Art and design | 0 | 63 | 4 | 3 | 145 | 69 | 232 | 205 | 87 | 34 | 38 | 905 | 90 | 489 | 0 | 6,138 |
| Business studies | 10 | 241 | 15 | 6 | 1,089 | 275 | 1,342 | 386 | 290 | 169 | 146 | 3,244 | 902 | 1,332 | 0 | 29,187 |
| Education, Teacher training | 0 | 56 | 43 | 11 | 354 | 92 | 126 | 215 | 47 | 15 | 17 | 602 | 69 | 163 | 0 | 4,326 |
| Engineering, Technology | 0 | 189 | 6 | 9 | 224 | 112 | 752 | 479 | 604 | 106 | 35 | 3,109 | 424 | 269 | 0 | 14,314 |
| Geography, Geology | 0 | 25 | 8 | 2 | 84 | 5 | 158 | 66 | 147 | 10 | 6 | 450 | 31 | 88 | 0 | 2,350 |
| Humanities | 0 | 33 | 2 | 1 | 81 | 39 | 171 | 60 | 116 | 22 | 12 | 654 | 48 | 206 | 8 | 5,215 |
| Languages, Philological sciences | 0 | 92 | 14 | 7 | 253 | 84 | 675 | 334 | 451 | 84 | 97 | 2,568 | 121 | 2,875 | 0 | 21,171 |
| Law | 0 | 87 | 6 | 31 | 303 | 77 | 429 | 190 | 98 | 25 | 51 | 1,413 | 195 | 754 | 1 | 9,602 |
| Mathematics, Informatics | 0 | 65 | 0 | 1 | 55 | 35 | 301 | 87 | 176 | 23 | 3 | 674 | 46 | 92 | 0 | 4,179 |
| Medical sciences | 0 | 85 | 8 | 32 | 219 | 142 | 247 | 407 | 209 | 71 | 6 | 1,211 | 176 | 232 | 0 | 7,070 |
| Natural sciences | 0 | 43 | 7 | 4 | 51 | 22 | 361 | 216 | 206 | 29 | 2 | 1,062 | 84 | 220 | 0 | 5,139 |
| Social sciences | 0 | 97 | 19 | 5 | 992 | 137 | 928 | 487 | 355 | 29 | 65 | 1,701 | 313 | 585 | 1 | 14,214 |
| Communication and information science | 0 | 17 | 1 | 5 | 264 | 10 | 68 | 155 | 54 | 3 | 19 | 800 | 56 | 83 | 0 | 3,589 |
| Other areas | 0 | 16 | 1 | 0 | 85 | 11 | 53 | 162 | 40 | 7 | 2 | 221 | 29 | 32 | 0 | 1,482 |
| Total | 19 | 1,194 | 138 | 119 | 4,388 | 1,156 | 6,276 | 3,782 | 3,005 | 682 | 546 | 20,034 | 2,667 | 7,539 | 10 | 135,586 |

***Table 2* Erasmus students 2003-2007 by home country and host country**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Home Country** | **Code** | **AT** | **BE** | **BG** | **CY** | **CZ** | **DK** | **EE** | **FI** | **FR** | **DE** | **GR** | **HU** | **IS** | **IE** | **IT** | **LV** |
| Austria | AT |  | 79 | 3 | 5 | 51 | 104 | 7 | 227 | 528 | 262 | 30 | 30 | 15 | 132 | 461 | 5 |
| Belgium | BE | 105 |  | 11 | 1 | 51 | 84 | 5 | 218 | 768 | 306 | 75 | 28 | 3 | 121 | 467 | 4 |
| Bulgaria | BG | 52 | 46 |  |  |  | 14 |  | 16 | 136 | 227 | 62 |  |  | 6 | 39 |  |
| Cyprus | CY | 1 | 0 | 0 |  |  | 2 |  | 14 | 9 | 4 | 13 |  |  | 0 | 3 |  |
| Czech Republic | CZ | 211 | 134 |  |  |  | 103 |  | 241 | 510 | 931 | 78 |  |  | 43 | 180 |  |
| Denmark | DK | 70 | 44 |  | 2 | 19 |  | 2 | 5 | 260 | 302 | 13 | 3 | 12 | 36 | 111 |  |
| Estonia | EE | 16 | 10 |  |  |  | 19 |  | 47 | 42 | 59 | 6 |  |  | 2 | 26 |  |
| Finland | FI | 229 | 148 | 5 | 9 | 126 | 37 | 35 |  | 413 | 654 | 72 | 162 | 14 | 111 | 190 | 9 |
| France | FR | 361 | 420 | 9 | 10 | 206 | 500 | 21 | 727 |  | 2,804 | 218 | 169 | 23 | 1,081 | 1,550 | 3 |
| Germany | DE | 387 | 330 | 17 | 7 | 207 | 410 | 25 | 918 | 3,997 |  | 165 | 171 | 47 | 926 | 1,755 | 23 |
| Greece | GR | 71 | 140 | 6 | 8 | 63 | 45 | 1 | 116 | 420 | 356 |  | 20 | 2 | 27 | 248 | 1 |
| Hungary | HU | 110 | 98 |  |  |  | 44 |  | 201 | 276 | 566 | 42 |  |  | 15 | 227 |  |
| Iceland | IS | 10 | 4 |  |  |  | 54 |  | 1 | 26 | 40 | 3 |  |  | 2 | 16 |  |
| Ireland | IE | 35 | 47 | 6 | 1 | 26 | 30 | 2 | 40 | 557 | 292 | 12 | 5 |  |  | 109 |  |
| Italy | IT | 339 | 633 | 8 | 7 | 86 | 357 | 28 | 367 | 2,859 | 1,994 | 180 | 129 | 29 | 230 |  | 4 |
| Latvia | LV | 8 | 27 |  |  |  | 13 |  | 42 | 18 | 111 | 2 |  |  | 2 | 9 |  |
| Liechtenstein | LI | 0 | 0 |  |  |  | 2 |  | 3 |  | 1 |  |  |  | 1 |  |  |
| Lithuania | LT | 49 | 70 |  |  |  | 145 |  | 180 | 77 | 294 | 18 |  |  | 10 | 67 |  |
| Luxembourg | LU | 17 | 1 | 0 | 0 | 2 | 2 | 0 | 1 | 27 | 39 |  | 0 | 0 | 0 | 9 | 0 |
| Malta | MT | 4 | 5 | 0 | 0 | 0 | 2 | 0 | 6 | 3 | 6 | 0 |  |  | 6 | 52 |  |
| Netherlands | NL | 98 | 184 | 1 | 0 | 44 | 158 | 7 | 275 | 543 | 391 | 42 | 49 | 11 | 88 | 256 | 6 |
| Norway | NO | 50 | 28 | 0 | 0 | 0 | 53 | 0 | 15 | 156 | 190 | 15 | 0 | 0 | 17 | 85 | 0 |
| Poland | PL | 159 | 358 |  |  |  | 362 |  | 310 | 855 | 1,870 | 122 |  |  | 74 | 481 |  |
| Portugal | PT | 53 | 250 | 8 | 8 | 103 | 63 | 3 | 95 | 325 | 295 | 53 | 59 | 4 | 19 | 713 | 5 |
| Romania | RO | 38 | 163 |  |  |  | 29 |  | 33 | 1,125 | 457 | 87 |  |  | 21 | 448 |  |
| Slovakia | SK | 44 | 50 |  |  |  | 11 |  | 52 | 80 | 191 | 24 |  |  | 2 | 58 |  |
| Slovenia | SI | 59 | 30 |  |  |  | 19 |  | 24 | 62 | 125 | 6 |  |  | 1 | 56 |  |
| Spain | ES | 298 | 1,054 | 11 | 0 | 169 | 573 | 12 | 501 | 3,412 | 2,553 | 178 | 67 | 21 | 513 | 4,250 | 1 |
| Sweden | SE | 142 | 42 | 0 | 0 | 38 | 25 | 10 | 24 | 484 | 426 | 17 | 28 | 9 | 80 | 137 | 3 |
| United Kingdom | UK | 143 | 117 | 5 | 4 | 107 | 136 | 8 | 233 | 2,303 | 1,127 | 60 | 31 | 9 | 21 | 740 | 1 |
| EUI\* | EUR | 2 |  |  |  |  |  |  |  | 4 | 1 |  |  |  |  |  |  |
| Total |  | 3,161 | 4,513 | 90 | 62 | 1,298 | 3,396 | 166 | 4,932 | 20,275 | 16,874 | 1,593 | 951 | 199 | 3,587 | 12,743 | 65 |

\*European University Institute, Florence

***Table 2* (Continued)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Home Country** | **Code** | **LI** | **LT** | **LU** | **MT** | **NL** | **NO** | **PL** | **PT** | **RO** | **SK** | **SI** | **ES** | **SE** | **UK** | **Total** |
| Austria | AT | 1 | 12 | 0 | 14 | 215 | 82 | 22 | 60 | 8 | 6 | 16 | 631 | 305 | 410 | 3,721 |
| Belgium | BE | 0 | 7 | 3 | 13 | 377 | 40 | 69 | 207 | 30 | 10 | 9 | 1,287 | 149 | 341 | 4,789 |
| Bulgaria | BG |  |  |  |  | 23 |  |  | 34 |  |  |  | 43 | 9 | 44 | 751 |
| Cyprus | CY |  |  |  |  |  |  |  | 2 |  |  |  | 3 | 5 | 8 | 64 |
| Czech Republic | CZ |  |  |  |  | 203 |  |  | 189 |  |  |  | 286 | 163 | 317 | 3,589 |
| Denmark | DK |  | 3 |  | 4 | 117 | 27 | 12 | 15 | 5 |  | 5 | 259 | 30 | 330 | 1,686 |
| Estonia | EE |  |  |  |  | 10 |  |  | 4 |  |  |  | 30 | 26 | 8 | 305 |
| Finland | FI |  | 15 |  | 16 | 377 | 15 | 60 | 58 | 13 | 22 | 29 | 479 | 101 | 552 | 3,951 |
| France | FR |  | 25 | 6 | 43 | 891 | 246 | 314 | 288 | 167 | 30 | 40 | 5,115 | 1,062 | 4,652 | 20,981 |
| Germany | DE | 8 | 49 | 1 | 28 | 862 | 463 | 395 | 283 | 27 | 26 | 24 | 4,325 | 1,653 | 3,159 | 20,688 |
| Greece | GR |  | 1 | 1 | 5 | 106 | 17 | 14 | 90 | 3 | 0 | 2 | 374 | 109 | 139 | 2,385 |
| Hungary | HU |  |  |  |  | 145 |  |  | 42 |  |  |  | 125 | 58 | 109 | 2,058 |
| Iceland | IS |  |  |  |  | 13 |  |  | 1 |  |  |  | 36 | 2 | 13 | 221 |
| Ireland | IE |  | 4 |  | 5 | 110 | 8 | 10 | 18 |  |  | 3 | 291 | 57 | 37 | 1,705 |
| Italy | IT | 1 | 28 |  | 71 | 607 | 156 | 174 | 766 | 129 | 29 | 20 | 5,688 | 399 | 1,511 | 16,829 |
| Latvia | LV |  |  |  |  | 24 |  |  | 4 |  |  |  | 9 | 32 | 7 | 308 |
| Liechtenstein | LI |  |  |  |  | 4 |  |  | 2 |  |  |  |  | 1 | 5 | 19 |
| Lithuania | LT |  |  |  |  | 30 |  |  | 51 |  |  |  | 61 | 120 | 22 | 1,194 |
| Luxembourg | LU | 0 | 0 |  | 0 | 0 | 0 | 1 | 6 | 0 | 0 | 0 | 14 | 3 | 16 | 138 |
| Malta | MT |  |  |  |  | 7 |  |  | 2 |  |  |  | 3 | 1 | 22 | 119 |
| Netherlands | NL | 0 | 10 | 0 | 18 |  | 140 | 21 | 93 | 14 | 3 | 5 | 907 | 389 | 635 | 4,388 |
| Norway | NO | 0 | 0 | 0 |  | 78 |  | 0 | 36 | 0 | 0 | 0 | 231 | 42 | 159 | 1,156 |
| Poland | PL |  |  |  |  | 294 |  |  | 222 |  |  |  | 546 | 286 | 337 | 6,276 |
| Portugal | PT | 1 | 26 | 0 | 4 | 250 | 38 | 125 |  | 68 | 7 | 14 | 920 | 95 | 178 | 3,782 |
| Romania | RO |  |  |  |  | 72 |  |  | 119 |  |  |  | 285 | 42 | 86 | 3,005 |
| Slovakia | SK |  |  | 3 |  | 29 |  |  | 30 |  |  |  | 59 | 17 | 32 | 682 |
| Slovenia | SI |  |  |  |  | 25 |  |  | 30 |  |  |  | 63 | 17 | 29 | 546 |
| Spain | ES | 0 | 24 | 0 | 9 | 1,263 | 200 | 176 | 992 | 59 | 32 | 22 |  | 670 | 2,974 | 20,034 |
| Sweden | SE | 0 | 11 | 0 | 11 | 236 | 22 | 24 | 25 | 3 | 0 | 6 | 370 |  | 494 | 2,667 |
| United Kingdom | UK | 0 | 3 | 0 | 12 | 365 | 69 | 42 | 97 | 10 | 16 | 6 | 1,636 | 238 |  | 7,539 |
| EUI\* | EUR |  |  |  |  |  |  |  |  |  |  |  |  | 1 | 2 | 10 |
| Total |  | 11 | 218 | 14 | 253 | 6,733 | 1,523 | 1,459 | 3,766 | 536 | 181 | 201 | 24,076 | 6,082 | 16,628 | 135,586 |

\*European University Institute, Florence

***Table 3* Sample of Erasmus student enrollments for the academic year 2005-2006**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Family name** | **First name** | **Home country** | **Study area** | **Gender** |
| Algard | Erik | Norway | Business studies | M |
| Alinei | Gratian | Romania | Business studies | M |
| Andersen | Birgitte Brix | Denmark | Engineering, Technology | F |
| Bay | Hilde | Norway | Social sciences | F |
| Bednarczyk | Tomasz | Poland | Law | M |
| Berberich | Remi | Germany | Engineering, Technology | M |
| Berculo | Ruwan | Netherlands | Business studies | M |
| Engler | Dorothea | Germany | Geography, Geology | F |
| Ernst | Folker | Germany | Business studies | M |
| Fouche | Elie | France | Education, Teacher training | M |
| Garcia | Miguel | Spain | Communication and information science | M |
| Guenin | Aurelie | France | Humanities | F |
| Johannessen | Sanne Lyng | Denmark | Business studies | F |
| Justnes | Petter | Norway | Languages, Philological sciences | M |
| Kauffeldt | Ane Katrine | Denmark | Business studies | F |
| Keddie | Nikki | United Kingdom | Mathematics, Informatics | F |
| Lorenz | Jan Sebastian | Germany | Business studies | M |
| Mallet | Guillaume | France | Business studies | M |
| Manzo | Margherita | Italy | Business studies | F |
| Margineanu | Florin | Romania | Agricultural sciences | M |
| Miechowka | Anne Sophie | France | Engineering, Technology | F |
| Mynborg | Astrid | Denmark | Humanities | F |
| Napolitano | Silvia | Italy | Architecture, Planning | F |
| Neilson | Alison | United Kingdom | Business studies | F |
| Ou | Kalvin | France | Education, Teacher training | M |
| Rachbauer | Thomas | Austria | Engineering, Technology | M |
| Savreux | Margaux | France | Mathematics, Informatics | F |
| Seda | Jiri | Czech Republic | Agricultural sciences | M |
| Semoradova | Petra | Czech Republic | Natural sciences | F |
| Torres | Maria Teresa | Spain | Humanities | F |
| Ungerstedt | Malin | Sweden | Law | F |
| Ververken | Alexander | Belgium | Languages, Philological sciences | M |
| Viscardi | Alessandra | Italy | Business studies | F |
| Zawisza | Katarzyna | Poland | Business studies | F |