



## Women in Sciences and Engineering

### Fall 2001 – Fall 2008

This report contains information about the number and percentage of females enrolled in science and engineering programs of study at Tennessee Tech from Fall 2001 through Fall 2008. The report contains three tables.

Table 1 shows total enrollment by gender in science and engineering programs. Table 2 displays female enrollment in science and engineering programs, and Table 3 shows the female percentage of enrollment in science and engineering programs.

As shown in Table 1, **undergraduate enrollment in science and engineering programs at Tennessee Tech increased across the period of Fall 2001 through Fall 2008.** The female percentage of enrollment decreased slightly in Fall 2006 and Fall 2007 before increasing in Fall 2008. Notable increases in female enrollment were attained in Biology and Chemical Engineering in Fall 2008.

**At the graduate level, the largest number and percentage of female students was in Fall 2005, when female enrollment reached 70 before decreasing in each of the three succeeding years.** With approximately 200 students, male graduate enrollment was largest in Fall 2003 and Fall 2004 before also decreasing in the succeeding four years.

**Total university enrollment in sciences and engineering generally increased across the period of Fall 2001 through Fall 2008, with the female percentage of enrollment fluctuating in the range of approximately 15 to 18 percent. Female enrollment numbers and percentages were largest around Fall 2005, followed by decreases in Fall 2006 and Fall 2007, and then a notable increase in Fall 2008, primarily at the undergraduate level.**

**Table 1: Science and Engineering Enrollment By Gender**

**Undergraduate**

|              |              |              |              |              |              |              |              |   |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---|
| 2001         | 2002         | 2003         | 2004         | 2005         | 2006         | 2007         | 2008         | Fall  |
| 302          | 314          | 323          | 324          | 313          | 308          | 307          | 347          | Female  |
| 1,545        | 1,566        | 1,583        | 1,601        | 1,590        | 1,692        | 1,836        | 1,809        | Male  |
| <b>1,847</b> | <b>1,880</b> | <b>1,906</b> | <b>1,925</b> | <b>1,903</b> | <b>2,000</b> | <b>2,143</b> | <b>2,156</b> | ALL   |
| <b>16.4%</b> | <b>16.7%</b> | <b>16.9%</b> | <b>16.8%</b> | <b>16.4%</b> | <b>15.4%</b> | <b>14.3%</b> | <b>16.1%</b> | Female Percentage of Undergraduate Students<br>in Science and Engineering |

**Graduate**

|              |              |              |              |              |              |              |              |  |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--|
| 2001         | 2002         | 2003         | 2004         | 2005         | 2006         | 2007         | 2008         | Fall   |
| 38           | 42           | 59           | 59           | 70           | 59           | 53           | 50           | Female   |
| 191          | 190          | 201          | 199          | 183          | 173          | 173          | 166          | Male   |
| <b>229</b>   | <b>232</b>   | <b>260</b>   | <b>258</b>   | <b>253</b>   | <b>232</b>   | <b>226</b>   | <b>216</b>   | ALL  |
| <b>16.6%</b> | <b>18.1%</b> | <b>22.7%</b> | <b>22.9%</b> | <b>27.7%</b> | <b>25.4%</b> | <b>23.5%</b> | <b>23.1%</b> | Female Percentage of Graduate Students<br>in Science and Engineering |

**All**

|              |              |              |              |              |              |              |              |   |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---|
| 2001         | 2002         | 2003         | 2004         | 2005         | 2006         | 2007         | 2008         | Fall  |
| 340          | 356          | 382          | 383          | 383          | 367          | 360          | 397          | Female  |
| 1,736        | 1,756        | 1,784        | 1,800        | 1,773        | 1,865        | 2,009        | 1,975        | Male  |
| <b>2,076</b> | <b>2,112</b> | <b>2,166</b> | <b>2,183</b> | <b>2,156</b> | <b>2,232</b> | <b>2,369</b> | <b>2,372</b> | ALL   |
| <b>16.4%</b> | <b>16.9%</b> | <b>17.6%</b> | <b>17.5%</b> | <b>17.8%</b> | <b>16.4%</b> | <b>15.2%</b> | <b>16.7%</b> | Female Percentage of All Students<br>in Science and Engineering |

**Table 2: Female Enrollment in Science and Engineering, By Program**

**Undergraduate**

| 2001       | 2002       | 2003       | 2004       | 2005       | 2006       | 2007       | 2008       | Fall   |
|------------|------------|------------|------------|------------|------------|------------|------------|--|
| <b>135</b> | <b>155</b> | <b>174</b> | <b>181</b> | <b>186</b> | <b>179</b> | <b>175</b> | <b>192</b> | <b>ARTS &amp; SCIENCES</b>                   |
| 69         | 75         | 94         | 109        | 110        | 109        | 99         | 116        | Biology (BS)                                 |
| 32         | 38         | 44         | 46         | 42         | 45         | 48         | 41         | Chemistry (BS)                               |
| 19         | 23         | 11         | 6          | 7          | 8          | 9          | 13         | Computer Science (BS)                        |
| 4          | 8          | 10         | 10         | 2          | 1          | --         | --         | Geology (BS)                                 |
| --         | --         | --         | --         | 10         | 5          | 10         | 12         | Geoscience (BS)                              |
| 10         | 7          | 13         | 9          | 13         | 9          | 8          | 9          | Mathematics (BS)                             |
| 1          | 4          | 2          | 1          | 2          | 2          | 1          | 1          | Physics (BS)                                 |
| <b>167</b> | <b>159</b> | <b>149</b> | <b>143</b> | <b>127</b> | <b>129</b> | <b>132</b> | <b>155</b> | <b>ENGINEERING</b>                           |
| 56         | 48         | 48         | 20         | 7          | 19         | 9          | 16         | Basic Engineering                            |
| 20         | 20         | 17         | 23         | 24         | 23         | 27         | 41         | Chemical Engineering (BSChE)                 |
| 34         | 31         | 30         | 32         | 29         | 27         | 40         | 35         | Civil & Environmental Engineering (BSCE)     |
| 4          | 8          | 6          | 4          | 4          | 2          | 3          | 10         | Computer Engineering (BSCmpE)                |
| 9          | 12         | 12         | 20         | 15         | 9          | 13         | 16         | Electrical Engineering (BSEE)                |
| 11         | 11         | 11         | 18         | 23         | 24         | 19         | 13         | Industrial & Systems Engineering (BSIE)      |
| 8          | 5          | 6          | 7          | 3          | 4          | 2          | 2          | Manufacturing & Industrial Technology (BSIT) |
| 25         | 24         | 19         | 19         | 22         | 21         | 19         | 22         | Mechanical Engineering (BSME)                |
| <b>302</b> | <b>314</b> | <b>323</b> | <b>324</b> | <b>313</b> | <b>308</b> | <b>307</b> | <b>347</b> | <b>UNDERGRADUATE TOTAL</b>                   |

**Graduate**

| 2001       | 2002       | 2003       | 2004       | 2005       | 2006       | 2007       | 2008       | Fall                                   |
|------------|------------|------------|------------|------------|------------|------------|------------|--|
| <b>15</b>  | <b>18</b>  | <b>25</b>  | <b>29</b>  | <b>39</b>  | <b>28</b>  | <b>23</b>  | <b>27</b>  | <b>ARTS &amp; SCIENCES</b>             |
| 8          | 6          | 10         | 9          | 15         | 7          | 6          | 9          | Biology (MS)                           |
| --         | 2          | 3          | 3          | 9          | 7          | 8          | 5          | Chemistry (MS)                         |
| --         | 2          | 2          | 7          | 7          | 3          | 2          | 2          | Computer Science (MS)                  |
| 5          | 5          | 7          | 6          | 3          | 4          | 4          | 7          | Environmental Sciences (PhD)           |
| 2          | 3          | 3          | 4          | 5          | 7          | 3          | 4          | Mathematics (MS)                       |
| <b>23</b>  | <b>24</b>  | <b>34</b>  | <b>30</b>  | <b>31</b>  | <b>31</b>  | <b>30</b>  | <b>23</b>  | <b>ENGINEERING</b>                     |
| 3          | 2          | 3          | 3          | --         | 2          | 5          | 4          | Chemical Engineering (MS)              |
| 2          | 5          | 8          | 6          | 9          | 6          | 4          | 2          | Civil & Environmental Engineering (MS) |
| 8          | 10         | 14         | 11         | 11         | 10         | 8          | 9          | Electrical Engineering (MS)            |
| 5          | 4          | 5          | 6          | 6          | 7          | 9          | 8          | Engineering (PhD)                      |
| 1          | 1          | 1          | --         | --         | --         | --         | --         | Industrial & Systems Engineering (MS)  |
| 4          | 2          | 3          | 4          | 5          | 6          | 4          | 0          | Mechanical Engineering (MS)            |
| <b>38</b>  | <b>42</b>  | <b>59</b>  | <b>59</b>  | <b>70</b>  | <b>59</b>  | <b>53</b>  | <b>50</b>  | <b>GRADUATE TOTAL</b>                  |
| <b>340</b> | <b>356</b> | <b>382</b> | <b>383</b> | <b>383</b> | <b>367</b> | <b>360</b> | <b>397</b> | <b>GRAND TOTAL</b>                     |

**Table 3: Female Percentage of Enrollment in Science and Engineering, By Program**

**Undergraduate**

| 2001        | 2002        | 2003        | 2004        | 2005        | 2006        | 2007        | 2008        | Fall   |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--|
| <b>36.0</b> | <b>37.5</b> | <b>39.0</b> | <b>36.7</b> | <b>35.4</b> | <b>33.3</b> | <b>30.9</b> | <b>31.8</b> | <b>ARTS &amp; SCIENCES</b>                   |
| 58.5        | 55.6        | 60.3        | 61.6        | 57.9        | 55.9        | 53.8        | 56.3        | Biology (BS)                                 |
| 51.6        | 56.7        | 53.7        | 45.5        | 43.8        | 51.7        | 50.5        | 46.1        | Chemistry (BS)                               |
| 13.0        | 15.0        | 8.2         | 4.3         | 4.6         | 4.6         | 4.6         | 6.4         | Computer Science (BS)                        |
| 22.2        | 34.8        | 32.3        | 43.5        | 66.7        | 100.0       | --          | --          | Geology (BS)                                 |
| --          | --          | --          | --          | 35.7        | 18.5        | 24.4        | 24.5        | Geoscience (BS)                              |
| 41.7        | 36.8        | 54.2        | 36.0        | 39.4        | 33.3        | 29.6        | 26.5        | Mathematics (BS)                             |
| 14.3        | 25.0        | 10.5        | 4.0         | 8.0         | 7.7         | 4.2         | 4.3         | Physics (BS)                                 |
| <b>11.3</b> | <b>10.8</b> | <b>10.2</b> | <b>10.0</b> | <b>9.2</b>  | <b>8.8</b>  | <b>8.4</b>  | <b>10.0</b> | <b>ENGINEERING</b>                           |
| 11.1        | 9.9         | 9.1         | 8.1         | 7.3         | 16.7        | 9.0         | 15.7        | Basic Engineering                            |
| 25.6        | 27.0        | 22.7        | 24.2        | 25.3        | 22.3        | 22.9        | 27.3        | Chemical Engineering (BSCHE)                 |
| 18.4        | 16.7        | 17.2        | 12.9        | 13.0        | 11.0        | 14.4        | 13.1        | Civil & Environmental Engineering (BSCE)     |
| 6.2         | 8.9         | 6.7         | 2.8         | 3.6         | 1.9         | 2.5         | 8.3         | Computer Engineering (BSCmpE)                |
| 13.8        | 13.3        | 13.5        | 8.9         | 7.4         | 4.3         | 5.7         | 7.7         | Electrical Engineering (BSEE)                |
| 26.2        | 28.2        | 34.4        | 36.0        | 39.0        | 41.4        | 33.9        | 22.8        | Industrial & Systems Engineering (BSIE)      |
| 7.3         | 4.4         | 5.3         | 5.5         | 2.3         | 2.8         | 1.2         | 1.2         | Manufacturing & Industrial Technology (BSIT) |
| 8.0         | 8.1         | 6.6         | 6.4         | 4.8         | 4.3         | 3.7         | 4.6         | Mechanical Engineering (BSME)                |
| <b>16.4</b> | <b>16.7</b> | <b>16.9</b> | <b>16.8</b> | <b>16.4</b> | <b>15.4</b> | <b>14.3</b> | <b>16.1</b> | <b>UNDERGRADUATE TOTAL</b>                   |

**Graduate**

| 2001        | 2002        | 2003        | 2004        | 2005        | 2006        | 2007        | 2008        | Fall                                   |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--|
| <b>27.3</b> | <b>26.1</b> | <b>33.3</b> | <b>34.5</b> | <b>41.1</b> | <b>33.3</b> | <b>28.8</b> | <b>34.6</b> | <b>ARTS &amp; SCIENCES</b>             |
| 34.8        | 21.4        | 33.3        | 30.0        | 38.5        | 25.9        | 22.2        | 32.1        | Biology (MS)                           |
| 0.0         | 22.2        | 30.0        | 37.5        | 75.0        | 63.6        | 53.3        | 35.7        | Chemistry (MS)                         |
| --          | 66.7        | 22.2        | 31.8        | 38.9        | 20.0        | 16.7        | 20.0        | Computer Science (MS)                  |
| 35.7        | 31.3        | 43.8        | 46.2        | 23.1        | 26.7        | 28.6        | 46.7        | Environmental Sciences (PhD)           |
| 22.2        | 23.1        | 30.0        | 36.4        | 38.5        | 43.8        | 25.0        | 36.4        | Mathematics (MS)                       |
| <b>13.2</b> | <b>14.7</b> | <b>18.4</b> | <b>17.2</b> | <b>19.6</b> | <b>20.9</b> | <b>20.5</b> | <b>16.7</b> | <b>ENGINEERING</b>                     |
| 12.5        | 10.0        | 16.7        | 18.8        | --          | 11.8        | 27.8        | 33.3        | Chemical Engineering (MS)              |
| 9.1         | 20.0        | 34.8        | 35.3        | 45.0        | 35.3        | 33.3        | 18.2        | Civil & Environmental Engineering (MS) |
| 20.5        | 24.4        | 26.9        | 20.0        | 24.4        | 27.0        | 19.0        | 19.1        | Electrical Engineering (MS)            |
| 16.1        | 12.9        | 11.6        | 12.5        | 11.5        | 15.9        | 20.5        | 18.2        | Engineering (PhD)                      |
| 14.3        | 50.0        | 50.0        | --          | --          | --          | --          | --          | Industrial & Systems Engineering (MS)  |
| 7.5         | 4.5         | 10.6        | 10.5        | 16.1        | 18.2        | 13.3        | 0.0         | Mechanical Engineering (MS)            |
| <b>16.6</b> | <b>18.1</b> | <b>22.7</b> | <b>22.9</b> | <b>27.7</b> | <b>25.4</b> | <b>23.5</b> | <b>23.1</b> | <b>GRADUATE TOTAL</b>                  |
| <b>16.4</b> | <b>16.9</b> | <b>17.6</b> | <b>17.5</b> | <b>17.8</b> | <b>16.4</b> | <b>15.2</b> | <b>16.7</b> | <b>GRAND TOTAL</b>                     |