



To: Presidents
Counselors
Workforce Development Forum

From: Natalie Palchak, Associate Research Analyst
Terrie Paulson, Associate Research Analyst

Date: June 10, 1996

Subject: Machine Tool Technology Needs Assessment Report

The Office of Institutional Planning & Analysis has completed the needs assessment on the Machine Tool Technology program. The attached page of "Highlights" contains a summary of our findings, which include the following:

- an extensive review of appropriate literature
- in-depth interviews with faculty and industry experts
- a survey of 82 local employers
- a survey of 70 students enrolled in either the Machine Tool Technology or Numerical Control program
- a review of similar programs at other colleges

Overall findings indicate that students appear to be satisfied with the program, yet there appears to be a need for smaller class sizes, and more hands-on time on the machines. In addition, the catalog description is not representative of what is presently being taught in the classes, and the machine tool lab is in need of updating its current machines and adding new machinery.

If you would like a copy of this assessment, please contact us at extension 7746. Otherwise, copies are available in counseling departments at each campus.

Attachment: Machine Tool Technology Needs Assessment "Highlights"

pc: Carlos Olivarez, Dean
Steve Atma, Faculty
Paul Wayrynen, Paraprofessional

HIGHLIGHTS

Purpose: The purpose of this report is to review current industry needs and educational responses related to the Machine Tool Technology programs at Oakland Community College: Machine Tool Technology (MAC) and Machine Tool Technology with the Numerical Control Option (NUM).

Methodology: This report includes an extensive literature review, official data, information obtained from telephone interviews with industry experts, and analysis of data collected from telephone surveys with employers and current or former OCC students who have enrolled in the MAC or NUM program in the last six semesters (Summer 1994 to Fall 1995).

Existing Programs: The Auburn Hills campus of OCC offers a Certificate of Achievement program as well as an Associate of Applied Science (AAS) program in Machine Tool Technology. OCC also offers an AAS in Machine Tool Technology with the Numerical Control Option. In addition, the Center for Dislocated (CDW) workers offers a 15 week Machine Tool Technology Program.

Occupational Outlook: The national demand for employees in the machine tool industry is decreasing. However, in Michigan, the demand for machine tool operators and numerical control operators (Computer Numerical Control) is expected to increase through the year 2005, with an average of 190 and 160 openings per year respectively. According to the employer survey, 44% of the respondents predict the employment future for machine tool employees in their company to be *excellent*. This could be due to the fact that, in this geographic area, the automobile industry is doing very well at this point in time.

Wages: Respondents to the employer survey indicate that the average beginning wage for entry-level employees in this industry is \$8.08, while the average maximum wage is \$19.50. The type of shop that indicated the lowest entry-level wage was CNC prototype (\$7.72), while the highest maximum wage was reported by a fabricating shop (\$20.49).

Level of Education/Training Needed: According to the literature and responses from the employer survey, it is not necessary to have education or training to obtain an entry-level position in the machine tool industry. However, further education and/or training can enable an employee to advance to a higher position, and several employers indicated that they do provide on-the-job-training.

Available Training: In the state of Michigan, there are twenty-two community colleges (including OCC) that offer programs in Machine Tool Technology and/or Computer Numerical Control. In addition, there is a Machinist Training Institute within Focus Hope, which is a private school.

Student Survey Analysis: Nearly all of the students surveyed (83%) indicated that their main reason for attending OCC was to *improve specific skills*. The majority of the students also indicated that they were satisfied with the Machine Tool Technology programs at OCC, however several mentioned that they did not receive enough time on the machines, and that the classes were too large.

Cost Analysis: There is an apparent need to update the machine tool lab at OCC: certain machinery is in need of replacement, and additional new machinery (e.g., CNC) is necessary to provide students with adequate skills necessary for employment in the industry today.

Summary: Results from this report indicate that the machine tool industry in Michigan will continue to grow in the near future, and that computers will play a major role in this growth. Therefore, in order to meet industry needs, the college should consider updating the lab.

Memo + Highlights

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