

\$86,250,000

ASPEN TECHNOLOGY, INC.

5 1/4% CONVERTIBLE SUBORDINATED DEBENTURES DUE JUNE 15, 2005

This Prospectus Supplement supplements the information we provided in our December 10, 1998 Prospectus relating to our 5 1/4% Convertible Subordinated Debentures due June 15, 2005 and the shares of our common stock that we must issue upon conversion of those Debentures, and in our Prospectus Supplements No. 1, No. 2, No. 3, No. 4, No. 5, No. 6, No. 7, No. 8 and No. 9. This Prospectus Supplement is not complete without the supplemented Prospectus, and we have not authorized anyone to deliver or use this Prospectus Supplement without the supplemented Prospectus.

In this Prospectus Supplement, we use capitalized terms that we defined in the Prospectus. You should read the Prospectus to understand those terms. Unless we indicate otherwise, the information in this Prospectus Supplement is as of January 25, 2000.

We are providing this Prospectus Supplement to update the following information to the table in the Prospectus under the caption "Selling Securityholders":

| SELLING SECURITYHOLDER          | PRINCIPAL AMOUNT OF DEBENTURES BENEFICIALLY OWNED PRIOR TO THE OFFERING |            | AMOUNT OF DEBENTURES OFFERED(2) | SHARES OF COMMON STOCK BENEFICIALLY OWNED PRIOR TO THE OFFERING |            | SHARES OF COMMON STOCK OFFERED | SHARES OF COMMON STOCK BENEFICIALLY OWNED AFTER THE OFFERING |            |
|---------------------------------|---|------------|---------------------------------|---|------------|--------------------------------|--|------------|
|                                 | NUMBER  | PERCENT(1) |                                 | NUMBER(3)   | PERCENT(4) |                                | NUMBER   | PERCENT(4) |
| Credit Research and Trading LLC | \$500,000   | *          | \$500,000                       | 9,439   | *          | 9,439                          | --   | --         |

\* Less than one percent.

(1) For purposes of this Prospectus Supplement only, we have calculated this percentage on the basis of \$86,250,000 aggregate principal amount of Debentures outstanding on January 25, 2000.

(2) This Selling Securityholder has indicated that it may offer all of the Debentures that it owns. As a result, no Debentures will be owned after the offering.

(3) For purposes of this Prospectus Supplement only, we have calculated this number using the conversion rate described on the front cover page of the Prospectus.

(4) For purposes of this Prospectus Supplement only, we have calculated this percentage on the basis of 25,479,027 shares of common stock outstanding on January 25, 2000.

THE DATE OF THIS PROSPECTUS SUPPLEMENT IS JANUARY 26, 2000.