Grazewski Paul
Form 4
May 11, 2011

FORM 4

OMB APPROVAL

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UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. *See* Instruction 1(b).

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person *
Grazewski Paul

(Last) (First) (Middle)

AMERICAN SCIENCE AND ENGINEERING, INC., 829 MIDDLESEX TURNPIKE

(Street)

BILLERICA, MA 01821

(City) (State) (Zip)

2. Issuer Name **and** Ticker or Trading Symbol
AMERICAN SCIENCE & ENGINEERING, INC. [ASEI]

3. Date of Earliest Transaction (Month/Day/Year)
05/10/2011

4. If Amendment, Date Original Filed(Month/Day/Year)

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

_____ Director
__X__ Officer (give title below)
_____ 10% Owner
_____ Other (specify below)
SVP

6. Individual or Joint/Group Filing(Check Applicable Line)
_X_ Form filed by One Reporting Person
___ Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

1.Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)		4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Stock (1)	05/10/2011		S(2)		826	D	$ 85.98 (3)	8,651	D	

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

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Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned
(*e.g.*, puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)		5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)		6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Underlying Securities (Instr. 3 and 4)		8. Price of Derivative Security (Instr. 5)
				Code	V	(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares	

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
Grazewski Paul AMERICAN SCIENCE AND ENGINEERING, INC. 829 MIDDLESEX TURNPIKE BILLERICA, MA 01821			SVP	

Signatures

/s/ M. Colette Cooke, attorney-in-fact	05/11/2011
**Signature of Reporting Person	Date

Explanation of Responses:

* If the form is filed by more than one reporting person, *see* Instruction 4(b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations. *See* 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

(1) On June 12, 2008, the reporting person was granted a restricted stock award for 2515 shares of common stock. The award vests based on satisfaction of certain performance criteria within a five year period from date of grant. The performance criteria was met for all of the shares, resulting in vesting of the award as to 2515 shares. On May 15, 2009, the reporting person was granted a restricted stock award for 3698 shares of common stock. The award vests based on satisfaction of certain performance criteria within a five year period from date of grant. The performance criteria was met as to two thirds of the shares, resulting in vesting of the award as to 2465 shares.

(2) The sales reported in this Form 4 were effected pursuant to a Rule 10b5-1 trading plan adopted by the reporting person March 7, 2011.

(3) The price reported is a weighted average price. These shares were sold in multiple transactions at prices ranging from a low of $84.59 to a high of $86.79 for an average of $85.98. The reporting person undertakes to provide to American Science and Engineering, Inc., any security holder of American Science and Engineering, Inc., or the staff of the Securities and Exchange Commission, upon request, full information regarding the number of shares sold at each separate price within the ranges set forth in this footnote to this Form 4.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure. Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.