

## IDAHO STATE UNIVERSITY COLLEGE OF TECHNOLOGY

**PROGRAM TITLE: INSTRUMENTATION & AUTOMATION ENGINEERING  
TECHNOLOGY****BOOK AND TOOL LIST**

Textbooks may be purchased at the University Bookstore located at the Pond Student Union - Building #14. Textbooks may also be purchased or reserved on-line through [www.efollett.com](http://www.efollett.com) or the bookstore's website at [www.isu.edu/bookstor](http://www.isu.edu/bookstor). Payments may be made with cash, check, VISA, Mastercard, American Express, or Discover. A shipping charge will be added for mail orders. See the bookstore's website for more information on purchasing or reserving books or for refund policy information. **Save Your Receipts!**

**Approximate total book and tool costs for this program's options are listed below.  
Additional book costs will vary depending on the courses taken to fulfill  
general education requirements for the AAS degree.  
For a breakdown of books by individual class requirements, you must check your course curriculum.**

**NOTE: PRICES ARE SUBJECT TO CHANGE AT ANYTIME WITHOUT PRIOR NOTIFICATION**

**\*\*SEE INSTRUCTOR BEFORE PURCHASING\*\***

**FIRST SEMESTER – ELECTRONICS CORE****I. BOOKS & SUPPLIES:**

DESCRIPTION	APPROXIMATE PRICE	
ELECTRONICS & COMPUTER MATH	0131711372	149.00
GROB'S BASIC ELECTRONICS	0072974751	137.00
Engineering Computational paper		7.00
Single subject spiral notebook		3.00
Jump Drive		20.00
Lab Book		14.00
Lab Lock Deposit (refundable at the end of 2 <sup>nd</sup> Semester)		(5.00)
<b>TOTAL BOOKS &amp; SUPPLIES – FIRST SEMESTER</b>		<b>\$330.00</b>

**II. LAPTOP/NOTEBOOK COMPUTER:****MINIMUM CONFIGURATION GUIDELINES**

Processor	Intel Core 2 Duo processor T5500 (1.66GHz)
Memory (RAM)	2GB
Hard Drive	80GB
Optical Drive	CD-RW/DVD
Wireless	802.11b/g
Ethernet	1Gb
Battery Life	3-4 hours
Warranty	3 years
Operating System	Windows Vista Home Premium
Software, Office Suite	MS Office Pro 2007

<b>Laptop/Notebook Computer and Software (approximate minimum cost)</b>	<b>\$890.00</b>
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ISU Bookstore offers the Windows Vista operating system upgrade for \$90.00 and MS Office Professional 2007 for \$200.00. (Check with Bookstore for updated prices.)

<b>Computer Account (needed on all wireless computers).</b> Purchase at Rendezvous Building (#38) Computer Lab or Business Administration Building (#5) Basement A18.	<b>\$25.00</b>
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**\*\*NOTE: DO NOT PURCHASE TOOLS UNTIL AFTER STUDENT ORIENTATION\*\***

### III. TOOLS

DESCRIPTION	APPROXIMATE PRICE
Wire stripper	4.50
Diagonal Pliers	12.00
Needle/long nose pliers 4 1/2"	10.00
Screwdriver, slotted 3/16 & 1/4" tips	6.25
Screwdriver, Phillips #0 & #1 tips	6.50
Screwdriver, Precision/Jewelers set	5.00
Alligator clip leads	4.20
Soldering Aide	3.25
Soldering Iron/pencil 25 Watt (or less) with holder	25.00
Solder, 1/4 lb 60-40 Rosin Core	4.25
Solder wick (braided flat copper wire)	3.75
Desoldering bulb or pump, 060820 Electronix Express or equivalent	6.00
Circuit board holder, Helping Hands	8.10
Safety glasses	8.00
Proto Board or Bread Board	25.00
Scientific Calculator	15.00
Tool Box with lock (large enough to store volt-ohm meter)	20.00
Digital Volt-Ohm-Millampmeter (see specifications below)	65.00
<b>TOTAL TOOLS – FIRST SEMESTER</b>	<b>\$231.80</b>

#### DIGITAL VOLT-OHM-MILLAMPMETER SPECIFICATIONS:

DC Voltage ranges = 2V, 20V, 200V, 600V  
 Resistance ranges = >200Ω, 2KΩ, 200KΩ, 2MΩ, 20MΩ  
 AC Current ranges = >200mA, 20A  
 DC Current ranges = >20μA, 200μA, 200mA, 10A  
 Input Impedance = 10 – 12 MΩ

<b>APPROXIMATE TOTAL BOOKS, COMPUTER, AND TOOLS - FIRST SEMESTER</b>	<b>\$1,476.80</b>
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**SECOND SEMESTER - ELECTRONICS CORE****I. BOOKS & SUPPLIES**

DESCRIPTION	APPROXIMATE PRICE	
ELECTRONIC DEVICES:CONV CURRENT VERS (W/CD)	0132429733	140.00
DIGITAL ELECTRONICS (W/2 CDS)	0132435789	137.00
Engineering Computational paper		7.00
Single subject spiral notebook		3.00
<b>TOTAL BOOKS &amp; SUPPLIES – SECOND SEMESTER</b>		<b>\$287.00</b>

<b>Computer Account (needed on all wireless computers).</b> Purchase at Rendezvous Building (#38) Computer Lab or Business Administration Building (#5) Basement A18.	<b>\$25.00</b>
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**II. TOOLS**

DESCRIPTION	APPROXIMATE PRICE	
Radio Kit (Available from the Program)		25.00
Heat Sink, GC 9077 or equivalent		1.25
Soldering aide tool, GC 9075 or equivalent		2.25
Solder wick (for de-soldering), GC 684/685 or equivalent		3.75
*Solder, 60/40 Rosin Core only, 1/4 lb reel (18GA)		4.25
*Solder Flux paste (non-acid)		3.25
<b>TOTAL TOOLS – SECOND SEMESTER</b>		<b>\$39.75</b>

\*These items were purchased for 1<sup>st</sup> Semester, but additional quantities may be needed.

<b>APPROXIMATE TOTAL BOOKS AND TOOLS - SECOND SEMESTER</b>	<b>\$351.75</b>
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<b>APPROXIMATE TOTAL BOOKS, COMPUTER, AND TOOLS – CORE YEAR</b>	<b>\$1,828.55</b>
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**THIRD SEMESTER****I. BOOKS & SUPPLIES**

DESCRIPTION	APPROXIMATE PRICE	
<b>INST 281 ELECTRICAL AUTOMATION THEORY</b>		
ELECTRICAL MOTOR CONTROLS (W/CD)	0826916759	80.00
1999 NEC CODEBOOK, NFPA		58.00
UNDERSTANDING THE NEC	0971030715	60.00
UGLY'S ELECTRICAL REFERENCE	0962322962	12.00
2 ea Binders, Large, 3-ring		15.00
<b>INST 282 ELECTRICAL AUTOMATION LABORATORY</b>		
Class fee (INST 282)		15.00

<b>ELTR 269 ELECTRONIC DRAFTING I</b>	
Class fee (ELTR 269)	15.00
<b>APPROXIMATE TOTAL BOOKS &amp; SUPPLIES - THIRD SEMESTER</b>	<b>\$255.00</b>

**TALK TO YOUR INSTRUCTOR BEFORE PURCHASING ANY OF THE FOLLOWING TOOLS.**

## II. SUPPLIES & DRAFTING TOOLS

DESCRIPTION	APPROXIMATE PRICE
Disk, floppy	2.00
Eraser, Pencil	2.00
Guide, Ames Lettering	2.00
Lead, Pencil 0.5 mm and 0.7 mm	2.00
Pencil, Mechanical 0.5 mm	5.00
Pencil, Mechanical 0.7 mm	5.00
Scale, Architect's	3.00
Tape, Drafting	1.00
Template, Circle	2.00
Template, Electronic Symbol R 375 or R 301	8.00
Triangle, 45	7.00
<b>APPROXIMATE TOTAL SUPPLIES &amp; DRAFTING TOOLS - THIRD SEMESTER</b>	<b>\$39.00</b>

<b>APPROXIMATE TOTAL BOOKS &amp; TOOLS - THIRD SEMESTER</b>	<b>\$294.00</b>
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## FOURTH SEMESTER

**TALK WITH YOUR INSTRUCTOR BEFORE PURCHASING THE FOLLOWING ITEMS:**

## I. BOOKS & SUPPLIES

DESCRIPTION	APPROXIMATE PRICE
<b>INST 296 PROCESS MEASUREMENT AND CONTROL THEORY</b>	
PROCESS INSTRUMENTATION Vol 1 Product #SCP114	87.00
PROCESS INSTRUMENTATION Vol 2 Product #SCP115	87.00
PURDY'S INSTRUMENT HANDBOOK	1880215265 16.00
UGLY'S ELECTRICAL REFERENCE (2008 ED)	0763771263 23.00

ELECTRICAL MOTOR CONTROLS ETC (W/CD)	0826912176	96.00
Graduation Application fee for first Certificate/Degree		20.00
Optional fee for any additional Certificate/Degree		(10.00)
<b>APPROXIMATE TOTAL BOOKS &amp; FEES - FOURTH SEMESTER</b>		<b>\$329.00</b>

<b>APPROXIMATE TOTAL BOOKS &amp; FEES - ENTIRE PROGRAM</b>	<b>\$2,451.55</b>
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ANTICIPATE ADDITIONAL EXPENSES ASSOCIATED WITH THIS PROGRAM:

**TEXTBOOKS ASSOCIATED WITH ACADEMIC COURSES,**

TRANSPORTATION, PARKING, CHILD CARE, HOUSING.

YOU MUST CHECK YOUR CLASS SCHEDULE TO DETERMINE TEXTBOOKS REQUIRED BY INSTRUCTOR.