SEWARD COUNTY COMMUNITY COLLEGE

LEGO MINDSTORMS EV3

education.lego.com/en-us/products/lego-mindstorms-education-ev3-core-set-/5003400

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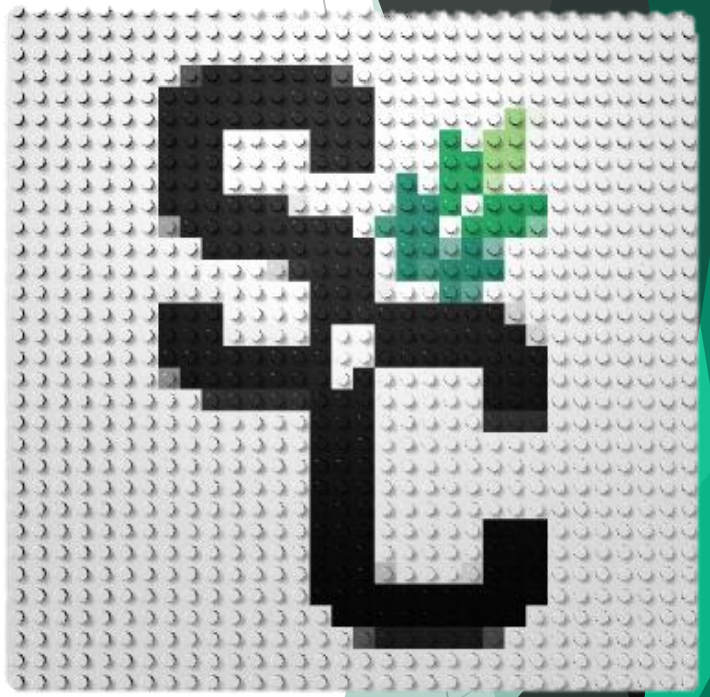
Ed Hall
CIS Instructor
Seward County Community College

Ed.hall@sccc.edu



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Timeline

2013 – Volunteered as Robotics Judge at local FIRST LEGO League (FLL) competition

2013-2014 – Designed and submitted course

2015 – First taught with 5 kits and 15 students

2017 – Expecting 21 students

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Comparison[2][4]

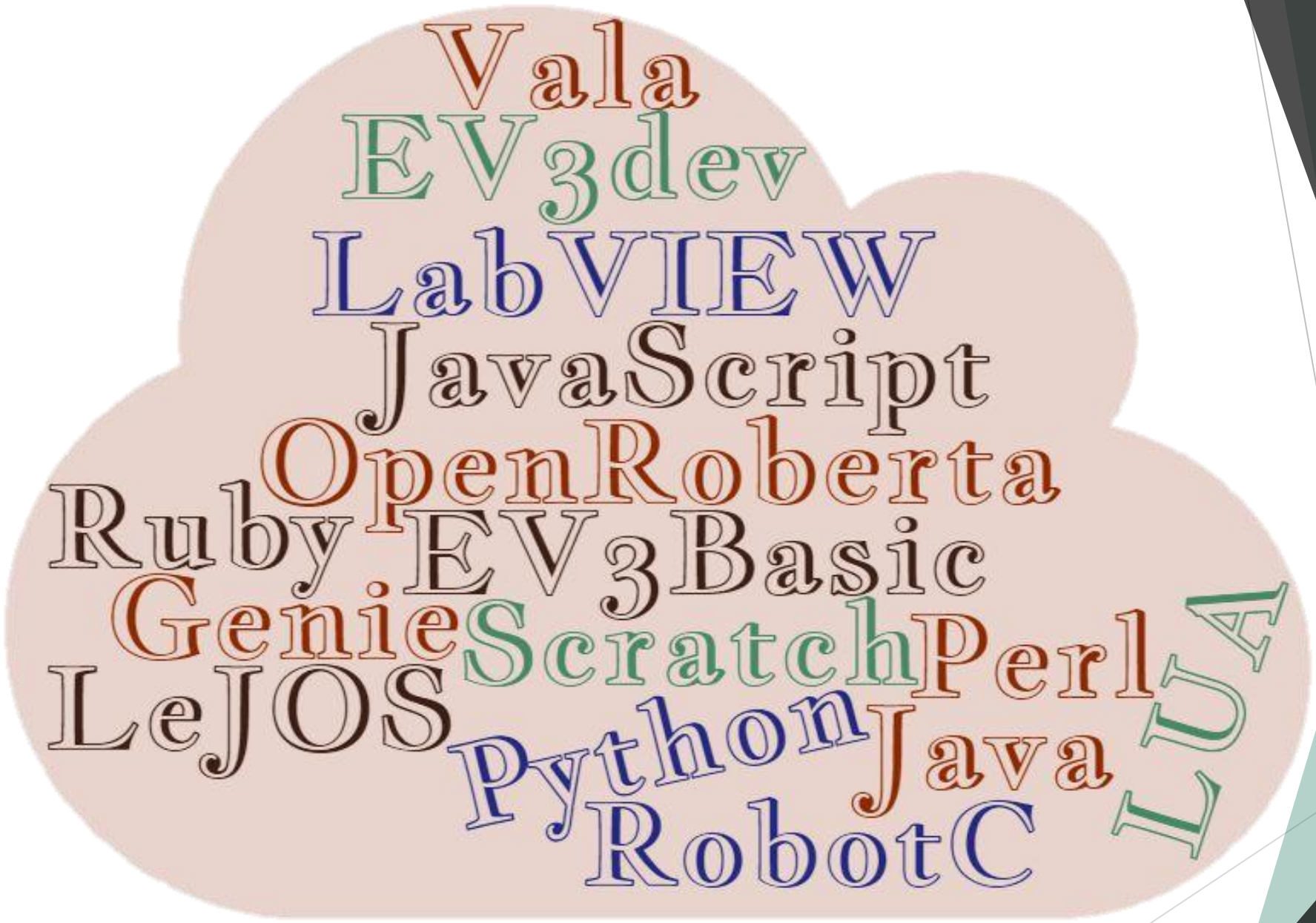
	EV3	NXT	RCX
Release Date	September 2013	July 2006	1998
Display	178×128 pixel Monochrome LCD	100×64 pixel Monochrome LCD	segmented Monochrome LCD
Main Processor	TI Sitara AM1808 (ARM926EJ-S core) @300 MHz	Atmel AT91SAM7S256 (ARM7TDMI core) @48 MHz	Hitachi H8/300 @16 MHz
Main Memory	64 MB RAM 16 MB Flash microSDHC Slot	64 KB RAM 256 KB Flash	32 KB RAM 16 KB ROM
USB Host Port	Yes	No	No
WiFi	Optional dongle via USB port	No	No
Bluetooth	Yes	Yes	No
Connects to Apple devices	Yes	No	No

LOGIC

Students learn how to break down complex problems into smaller solvable portions and then come together to apply the solutions.

PROGRAMMING

LEGO® provides a version of National Instruments LabVIEW software that integrates with all of the sensors and motors connected to the EV3.



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ROBOTICS

Students design and build robots to solve given problems. The robots are then programmed to run autonomously.

Robots can also be remote controlled.

ENGINEERING

Basic instructions are given to build the initial robot. From that point on, students use the kit parts to add functionality.

DOCUMENTATION

Each program must be documented. The documentation includes the processes followed to build and program the robot along with correction to any inconsistencies or issues encountered in producing the solutions.

Textbook

by

Terry Griffin

October 2014, 276 pp.
ISBN-13: 978-1-59327-568-6
Full Color

Price:
Print Book and free Ebook: $34.95
Ebook (PDF, Mobi, and ePub): $27.95

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MINDSTORMS EV3

LEGO MINDSTORMS Education EV3 Core Set

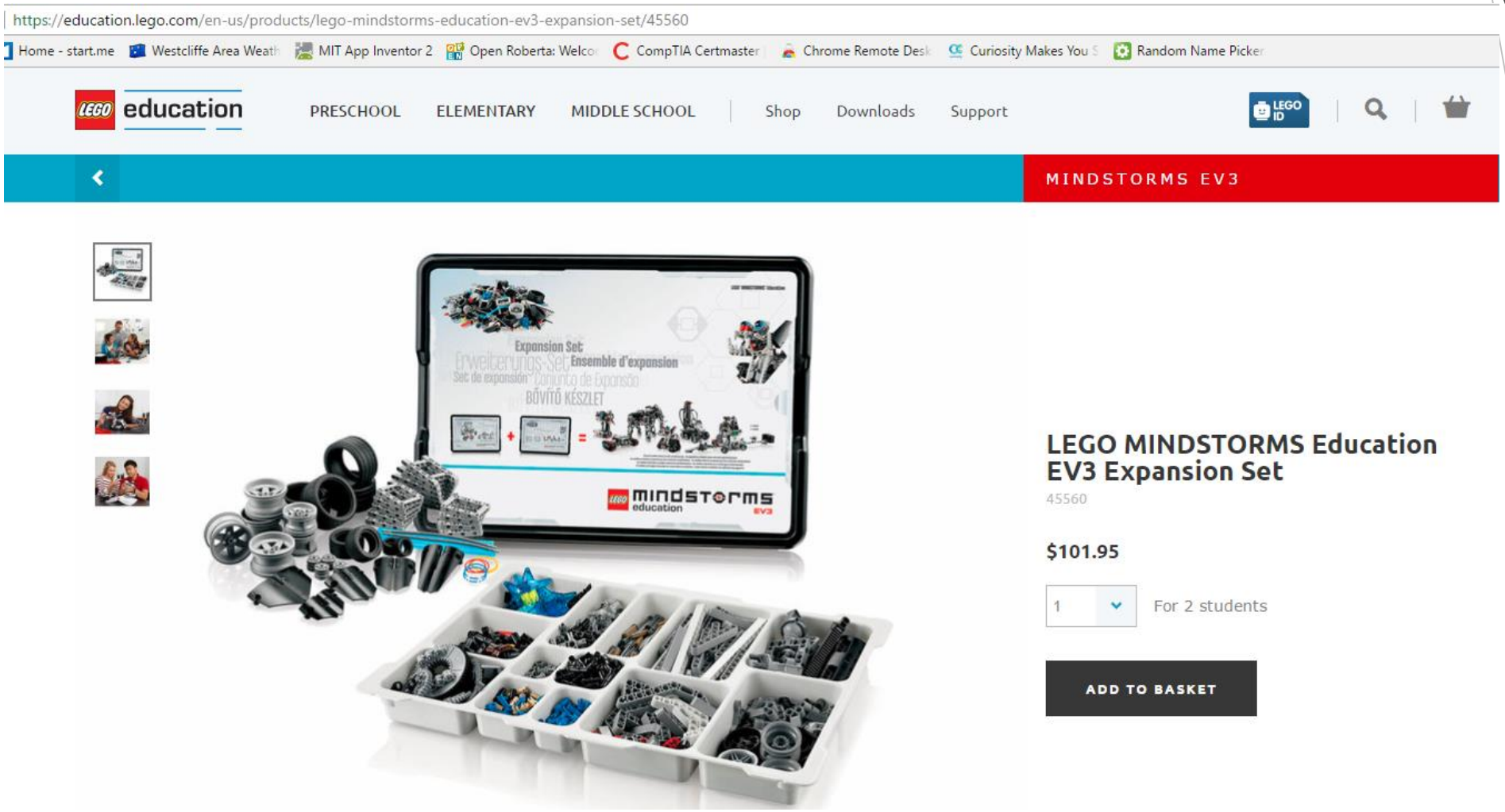
5003400

4.5 of 5

$389.95

1 | For 2 students

ADD TO BASKET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THANK YOU FOR YOUR TIME

Questions

Comments

Suggestions

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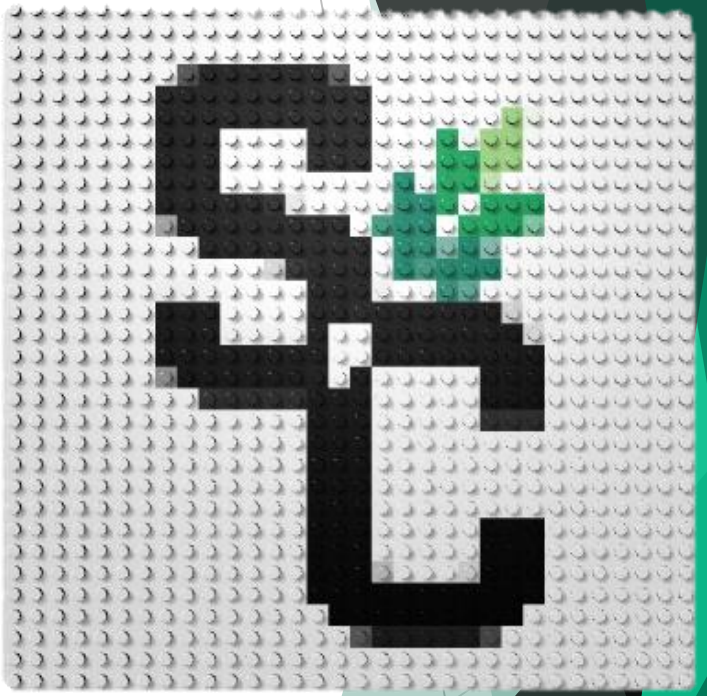

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References

Slide 04: https://en.wikipedia.org/wiki/Lego_Mindstorms_EV3
Slide 07: http://www.legoengineering.com/alternative-programming-languages/
Slide 07: http://www.ev3dev.org/docs/programming-languages/
Slide 11: https://www.nostarch.com/artofev3programming
Slide 12: https://education.lego.com/en-us/products/lego-mindstorms-education-ev3-core-set-/5003400
Slide 13: https://education.lego.com/en-us/products/lego-mindstorms-education-ev3-expansion-set/45560

SCCC logo converted to LEGO at http://me.brickapic.com/

Course offering at SCCC:
http://syllabi.sccc.edu/original/cs/CS1313-ProgrammingFundamentals.html

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