

# AN361 COMPUTER ANIMATION

August 2009

Fall Semester

PROFESSORS  
ALINA CHAU

## Syllabus

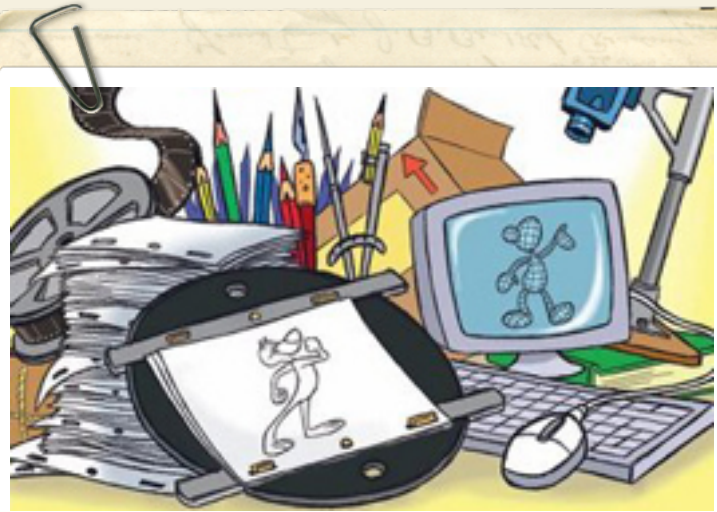
### COURSE DESCRIPTION

An Intermediate 3D computer graphic studio course, with lessons strongly focus in character animation, hard surface and organic modeling. Students are required to complete an independent project for the final, and present their works in class. Prerequisite (see catalog) AN 360 Computer Animation I.

### LEARNING OBJECTIVES

- \* Advance study of Maya character animation and modeling
- \* In depth study in modeling construction and anatomy study - how to integrate traditional artistic sensibility in 3D
- \* Detail study in character development, storytelling, acting and timing - how to integrate 2D animation skill in 3D
- \* Understand the production process of 3D animation/modeling - Students are required to complete a personal project with one of these disciplines - develop a character animated film or model a 3D environment, which could be used for portfolio presentation.

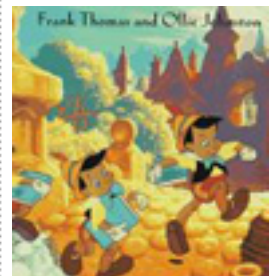
*'Never regard study as a duty, but as the enviable opportunity to learn to know the liberating influence of beauty in the realm of the spirit for your own personal joy and to the profit of the community to which your later work belongs.'* Albert Einstein (1879-1955)



Character Animation Crash Course By Eric Goldberg



*The Animator's Survival Kit*  
By Richard Williams



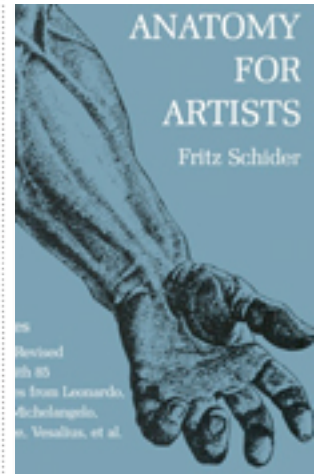
*Illusion of Life*  
By Frank Thomas & Ollie Johnston

## THE ANIMATION PODCAST

The Voices of Animation



<http://animationpodcast.com/>



By Fritz Schider

### EVALUATION

Student grades are determined by the following criteria:

- Knowledge of the software and ability to produce quality work.
- Careful attention to detail with regards to the look of the project.
- Execution of projects to completion.
- Ability to represent, visually, creative ideas and designs.
- Attendance with necessary materials and assignment preparation.
- Personal challenge and effort in project completion.
- Deadline compliance.

- \* Class attendance/participation - 10%
- \* Weekly animation assignment - 20%
- \* Mid-term presentation of final project - 20%
- \* Semi-Final presentation - 5%
- \* Final - the completion of a 10 -15 sec animated short - 40%
- \* Drawing portfolio - 5%

### ATTENDANCE

Studio attendance is required and is a strong determinate to the students' success in the course. Roll will be taken and absences beyond 3 will lower the final grade. Students with absenteeism in excess of 4 will be encouraged to drop the course. It is important that students who are not prepared with their assignments still be present for valuable class critiques. Students should obtain 2 phone numbers from student colleagues and be prepared for the next class should they be absent.

Attendance is factored into the grade and points are allocated as follows:

2 = present, 1 = tardy, 0 = absent

“Don’t illustrate words or mechanical movements. Illustrate ideas or thoughts, with the attitudes and actions.”

Animation Notes  
From Ollie Johnston

“Comedy is unusual people in real situations; farce is real people in unusual situations.”

~ Chuck Jones ~

## GRADING POLICIES

Project grades will be issued on a scale, which includes all stages of the project including development, application and presentation. Students will automatically get at least a passing grade “D” for submission on time. To achieve a satisfying grade, students are expected to address all components as significant parts of the entire project process. In this class you are not competing with your fellow classmates, but with yourself. Students who constantly shown improvement, display diligent and challenge their own creativity, will be recognized and rewarded with good grades.

Project criteria is evaluated based on a point system as follows:

5 = Excellent, 4 = Good, 3 = Average, 2 = Weak,

1 = Poor, 0 = Not shown

Class grades are awarded by the following percentages of the total of the final scores.

A 93-100% Clearly stands out as excellent performance

A- 90-92%

B+ 87-89%

B 83-86% Grasps subject matter at a level considered to be good to very good

B- 80-82%

C+ 77-79%

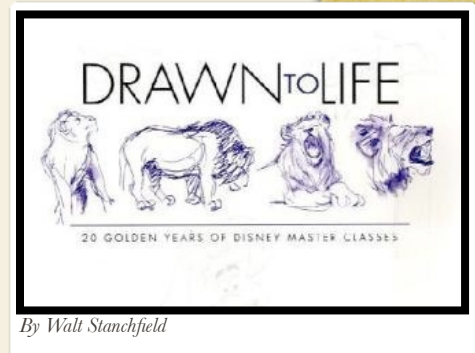
C 73-76% Demonstrates a satisfactory comprehension of the subject matter

C- 70-72%

D+ 67-69%

D 60-66% Quality and quantity of work is below average and marginally acceptable

F 59% and below Quality and quantity of work is below average and not acceptable



## PROJECT SUBMISSION

Weekly assignments will be reviewed in class individually with the teacher. Late submission of assignment will be down graded. Mid-term and final project are required to be presented in CD or DVD format. Disk must be clearly labeled with **name, class, date and e-mail address.**

## LATE PROJECTS

Late projects will receive a one number grade reduction. Projects will not be accepted after the last regular class session. Students are required to participate in the professional review process.

“Ten-year-old boys move differently than middle-aged women, who move differently than athletic guys, who move differently than government bureaucrats.”

~ Brad Bird ~



## PROJECT LABELING AND ARCHIVE POLICIES

Students are required to include a Woodbury ID label on the back of all projects submitted to the instructor. Boards and artwork should be labeled on back. Media should be labeled on the package, and name, class and year should be included on the media (disc or tape). Projects will not be accepted without this label. The University reserves the right to retain student work for archival purposes. See the Woodbury Catalog for the official policy on archiving of student work.

## NASAD ACCREDITATION STANDARDS

- Knowledge of the concepts related to the visual, spatial, sound, motion, interactive, and temporal elements/features of digital technology and principles for their use in the creation and application of digital media-based work. (DM3a)
- Understanding of narrative and other information/language structures for organizing content in time-based or interactive media; the ability to organize and represent content structures in ways that are responsive to technological, social, and cultural systems. (DM3b)
- Knowledge of the processes for the development and coordination of digitally based art and design strategies (for example, storyboarding, concept mapping, and the use of scenarios and personas.) (DM3d)
- Understanding, through production-oriented studies, of the communication, aesthetic, and design principles in the elements of animation, including the use of time as an expressive design consideration. (FV3a)
- Knowledge and skills in the use of basic concepts, tools, techniques, and procedures sufficient to produce work from concept to finished product. (FV3b)

## CLASS CONTENT

This course emphasizes on in-depth studies of 3D animation and modeling in Maya. Students will learn how to integrate traditional animation skills with 3D animation. The first half of the semester, students are required to complete a series of animation and modeling assignments. The completed assignment will be discuss in class during individual tutoring section with the teacher. Although this is a CG animation class, students are required to submit 25 pages of drawing portfolios of animation thumbnails, storyboard, concept arts and gesture drawings. For final, students need to complete an independent modeling or animation project and present it in class.



Frederic Back - <http://www.fredericback.com/>



<http://www.ghibliworld.com/>

“All children are artists. The problem is how to remain an artist once he grows up.” Pablo Picasso

## SCHEDULE

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### WEEK 1

#### **Tuesday**

- Introduction
- Lecture: Revision of Animation Theories and Lesson from Maya I Class
- **Assignment 1**
- \* Bouncing disc animation
- \* Bouncing disc hit ball animation

#### **Thursday**

- Assignment related problem solving Q&A section
  - Screening section - FUN film/cartoon screening section!!
  - Students are required to work on their assignment during class
  - Individual tutoring section
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### WEEK 2

#### **Tuesday**

- Lecture: Timing in Maya - Graph Editor and Dope Sheet
- Submission of Assignment 1
- Individual assignment discussion section with teacher
- **Assignment 2**
- \* Personality Walk Cycle

#### **Thursday**

- Assignment related problem solving Q&A section
- Screening section - FUN film/cartoon screening section!!
- Students are required to work on their assignment during class
- Individual tutoring section

## WEEK 3

### Tuesday

- Lecture: Key Frame character animation in Maya - From Blocking to Breakdown
- Students are required to work on their assignment during class
- Individual tutoring section

### Thursday

- Assignment related problem solving Q&A section
- Screening section - FUN film/cartoon screening section!!
- Students are required to work on their assignment during class
- Individual tutoring section

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## WEEK 4

### Tuesday

- Lecture: Character Development and Weight Animation Theories
- Submission of Assignment 2
- Screening section - FUN film/cartoon screening section!!
- **Assignment 3**
- \* Weight exercise (Old man get up from chair)

### Thursday

- Lecture: Preparation for Mid-Term - Idea Development
- Assignment related problem solving Q&A section
- Screening section - FUN film/cartoon screening section!!
- Students are required to work on their assignment during class

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## WEEK 5

### Tuesday

- Lecture: Timing in Maya - Graph Editor and Dope Sheet
- Assignment related problem solving Q&A section
- Screening section - FUN film/cartoon screening section!!
- Students are required to work on their assignment during class
- Individual tutoring section

### Thursday

- Lecture: Preparation for Mid-Term - Concept Art and Storyboard
- Assignment related problem solving Q&A section
- Screening section - FUN film/cartoon screening section!!
- Students are required to work on their assignment during class

## WEEK 6

### Tuesday

- Lecture: Foundation Poly Modeling Theories
- Submission of Assignment 3
- Screening section - FUN film/cartoon screening section!!
- **Assignment 4**
- \* Hard Surface modeling (Cell Phone or Bus)

### Thursday

- Preparation for Mid-Term Presentation - Work In Progress Meeting with the teacher
  - Assignment related problem solving Q&A section
  - Screening section - FUN film/cartoon screening section!!
  - Students are required to work on their assignment during class
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## WEEK 7

### Tuesday

- Preparation for Mid-Term Presentation - Work In Progress Meeting with the teacher
- Assignment related problem solving Q&A section
- Screening section - FUN film/cartoon screening section!!
- Students are required to work on their assignment during class

### Thursday

- Preparation for Mid-Term Presentation - Revision Meeting with the teacher
  - Assignment related problem solving Q&A section
  - Screening section - FUN film/cartoon screening section!!
  - Students are required to work on their assignment during class
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## WEEK 8

### Tuesday

- Lecture: Storytelling and Character Development in 3D Modeling
- Submission of Assignment 4
- Screening section - FUN film/cartoon screening section!!
- **Assignment 5**
- \* Organic modeling (Rabbit or Fox)

### Thursday - MID-TERM PRESENTATION!!

- Mid-Term Class presentation
- If mid-term presentation finish early, we will have:
- Screening section - FUN film/cartoon screening section!!
- Individual tutoring section for Assignment 5

**WEEK 9****Tuesday**

- Lecture: Pre-Production Development of a 3D production
- Assignment related problem solving Q&A section
- Screening section - FUN film/cartoon screening section!!
- Students are required to work on their assignment during class
- Individual tutoring section

**Thursday**

- Assignment related problem solving Q&A section
  - Screening section - FUN film/cartoon screening section!!
  - Students are required to work on their assignment during class
  - Individual tutoring section
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**WEEK 10****Tuesday**

- Lecture: 3D Production Scheduling and Management
- Submission of Assignment 5
- Screening section - FUN film/cartoon screening section!!
- Students are required to work on their final project during class
- Individual tutoring section

**Thursday**

- Final Project related problem solving Q&A section
  - Screening section - FUN film/cartoon screening section!!
  - Students are required to work on their final project during class
  - Individual tutoring section
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**WEEK 11****Tuesday**

- Lecture: Preparation for Semi Final
- Screening section - FUN film/cartoon screening section!!
- Students are required to work on their final project during class
- Individual tutoring section

**Thursday**

- Preparation for Semi Final - Work In Progress Meeting with the teacher
- Screening section - FUN film/cartoon screening section!!
- Students are required to work on their final project during class



## WEEK 12

### **Tuesday**

- Preparation for Semi Final - Work In Progress Meeting with the teacher
- Screening section - FUN film/cartoon screening section!!
- Students are required to work on their final project during class

### **Thursday - SEMI FINAL**

- Individual Semi Final Meeting with the teacher - Final project and sketchbook work in progress report
  - Screening section - FUN film/cartoon screening section!!
  - Students are required to work on their final project during class
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## WEEK 13

### **Tuesday - SEMI FINAL**

- Individual Semi Final Meeting with the teacher - Final project and sketchbook work in progress report
- Screening section - FUN film/cartoon screening section!!
- Students are required to work on their final project during class

### **Thursday**

- Preparation for Final - Work In Progress Meeting with the teacher
  - Screening section - FUN film/cartoon screening section!!
  - Students are required to work on their final project during class
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## WEEK 14

### **Tuesday**

- Preparation for Final - Work In Progress Meeting with the teacher
- Screening section - FUN film/cartoon screening section!!
- Students are required to work on their final project during class

### **Thursday**

- Preparation for Final - Work In Progress Meeting with the teacher
  - Screening section - FUN film/cartoon screening section!!
  - Students are required to work on their final project during class
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## WEEK 15

### **Tuesday**

- Lecture: Preparation for Final Presentation
- Preparation for Final - Work In Progress Meeting with the teacher
- Screening section - FUN film/cartoon screening section!!
- Students are required to work on their final project during class

### **Thursday - FINAL PRESENTATION**

“At seventy-three I learned a little about the real structure of animals, plants, birds, fishes and insects. Consequently when I am eighty I'll have made more progress. At ninety I'll have penetrated the mystery of things. At a hundred I shall have reached something marvellous, but when I am a hundred and ten everything I do, the smallest dot, will be alive.” ~ Katsushika Hokusai ~

## REFERENCE BOOKS RECOMMENDATION

\*\* The Illusion of Life by Frank Thomas and Ollie Johnston

Cartoon Animation by Preston Blair.

\*\* Character Animation Crash Course! by Eric Goldberg

\*\* The Animator's Survival Kit by Richard Williams

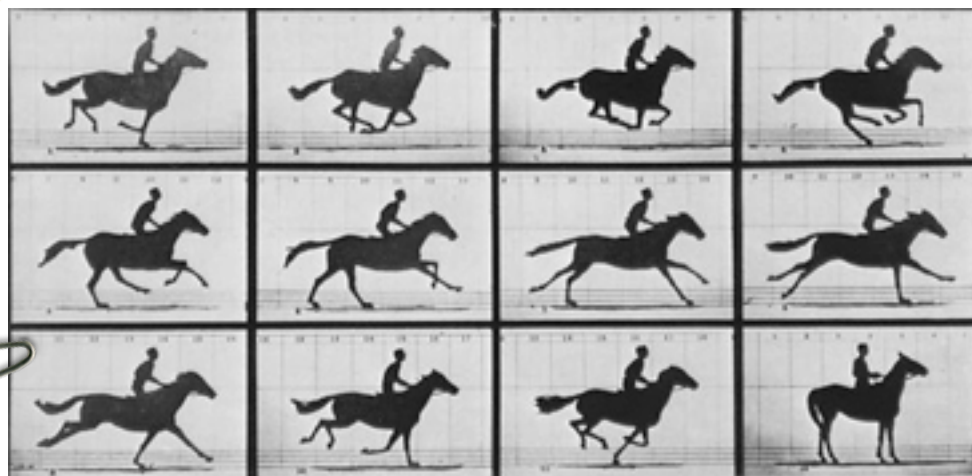
The Art of 3-D Computer Animation and Effects, Third Edition, by Isaac Victor Kerlow

\* Timing For Animation, by Harol Whitaker and John Halas

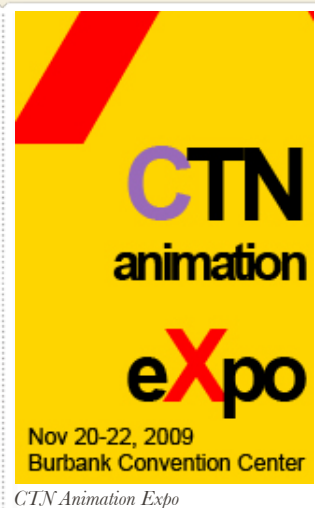
\*\* Thinking Animation: Bridging the Gap Between 2D and CG (Paperback), by Angie Jones, Jamie Oliff

\* The Animation Book: A Complete Guide to Animated Filmmaking--From Flip-Books to Sound Cartoons to 3- D Animation (Paperback) by Kit Laybourne, John Canemaker

The Animator's Workbook by Tony White



*Horses & Other Animals in Motion, by Eadweard Muybridge*



Cartoon Animation (The Collector's Series) by Preston Blair

Drawn to Life: 20 Golden Years of Disney Master Classes: Volume 1 & II: The Walt Stanchfield Lectures

Animation : From Script to Screen (Paperback) by Shamus Culhane

Storyboards: Motion in Art, Third Edition by Mark Simon

\* Animals in Motion by Eadweard Muybridge

\* The Human Figure in Motion -- by Eadweard Muybridge

\*\* The Five C's of Cinematography: Motion Picture Filming Techniques (Paperback) by Joseph V. Mascelli

\* Muybridge's Complete Human and Animal Locomotion, by Eadweard Muybridge

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“Animation is different from other parts. Its language is the language of caricature. Our most difficult job was to develop the cartoon's unnatural but seemingly natural anatomy for humans and animals.” ~ Walt Disney ~

## MAYA REFERENCE BOOKS

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Maya Character Animation, 2nd Edition by JaeJin Cho and Sybex

Introduction to 3D Graphics & Animation Using Maya (Graphics Series) By Adam Watkins

Learning Autodesk Maya 2008: The Modeling & Animation Handbook by Autodesk Maya Press

Maya 2008 Character Modeling and Animation (Graphic Series) by Tereza Flaxman

Inspired 3D Modeling & Texture Mapping by Tom Capizzi

Inspired 3D Advanced Rigging and Deformations by Brad Clark

Inspired 3D Short Film Production by Jeremy Cantor

Character Animation in 3D : Use traditional drawing techniques to produce stunning CGI animation,  
by Steve Roberts

Stop Staring: Facial Modeling and Animation Done Right by Jason Osipa

“If it's a good movie, the sound could go off and the audience would still have a perfectly clear idea of what was going on.”

~ Alfred Hitchcock ~

## REFERENCE DVDS

\*\* Hollywood Camera Work DVDs

<http://www.hollywoodcamerawork.us/>

\*\*The Human Motion Show and The Animal Motion Show

<http://www.rhinohouse.com/index.asp>

## ANATOMY

\*\* An Atlas of Anatomy for Artists (Paperback), by Fritz Schider

Atlas of Human Anatomy, Third Edition by Frank H. Netter, John T. Hansen

\*\* Vilppu Drawing Manual, by Glenn Vilppu

\*\* An Atlas of Animal Anatomy for Artists (Paperback), by Wilhelm Ellenberger

Animal Painting and Anatomy (Dover Art Instruction & Reference Books) by William Frank, Calderon, W. Frank Calderon

\*\* The Art of Animal Drawing : Construction, Action Analysis, Caricature by Ken Hultgren (Paperback)

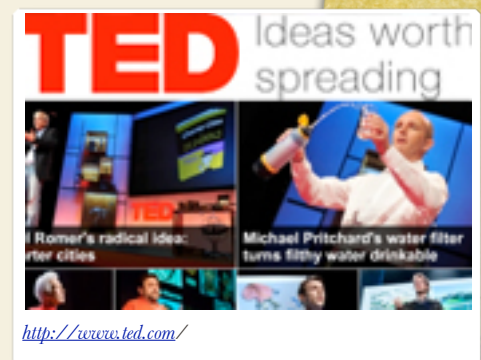
Human Anatomy for Artists: The Elements of Form (Hardcover), by Eliot Goldfinger

## STUDIO PRODUCTION BOOKS

Creating 3D Animation: The Aardman Book of Filmmaking Revised, by Peter Lord, Brian Sibley and Nick Park

Coraline: A Visual Companion, by Stephen Jones, It Books; Mti edition (January 6, 2009)

Batman Animated by Paul Dini



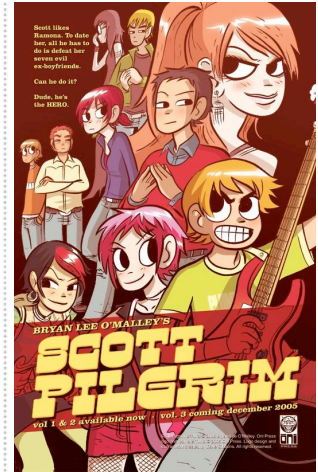
“I thought my life would seem more interesting with a musical score and a laugh track.”

Calvin & Hobbes





*The Art And Flair Of Mary Blair : An Appreciation, by John Canemaker*



*Scott Pilgrim*

## STUDIO PRODUCTION BOOKS

The Art of Wall E

The Art of UP

The Art of Ponyo on the Cliff by the Sea

Art of Walt Disney, by Christopher Finch

Walt Disney's Nine Old Men and the Art of Animation. New York: Disney Editions, 2001.

Paper Dreams: The Art and Artists of Disney Storyboards. by John Cranemaker

Ray Harryhausen: An Animated Life by Ray Harryhausen

Blue Sky : The Art of Computer Animation by Peter Weishar

Chuck Amuck: The Life and Times of an Animated Cartoonist, by Steven Spielberg (Foreword), Chuck Jones

The Art And Flair Of Mary Blair : An Appreciation, by John Canemaker

“Poetry and Hums aren't things which you get, they're things which get you. And all you can do is go where they can find you.”

Winner the Pooh

## Silly, Fun and Inspirational Books

THE COLLECTION BELOW IS COMPILED OF BOOKS, WHICH HAVE INSPIRED MANY GREAT NAMES IN THE INDUSTRY, SUCH US WALT DISNEY, CHUCK JONE, FRANK AND OLLIES, ERIC GOLDBERG TO NAME A FEW, AS WELL AS MY PERSONAL FAVORITES.

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The complete Persepolis by Marjane Satrapi

The Complete Maus: A Survivor's Tale by Art Spiegelman

The Expression of the Emotions in Man and Animals by Charles Darwin

Drawings of Heinrich Kley, by H. Kley

J.C. Leyendecker by Laurence S.Cutler & Judy Goffman Cutler

The 4-Hour Work Week: Escape 9-5, Live Anywhere, and Join the New Rich by Timothy Ferriss

Blankets by Craig Thompson

Hirschfeld's New York by Clare Bell

Winsor McCay: Early Works (Collections), by Winsor McCay

When You Are Engulfed in Flames by David Sedaris

John, Paul, George & Ben by Lane Smith

Where the Wild Things Are, by Maurice Sendak

Flotsam by David Wiesner

Einstein's Dreams by Alan Lightman (Fiction)

Leonardo, the Terrible Monster by Mo Willems

The Septimus Heap series by Angie Sage

Scott Pilgrim by Bryan Lee O'Malley

Pendragon Series by D.J. MacHale

The Invention of Hugo Cabret by Brain Selznick

# AN 361 COMPUTER ANIMATION



*Painting by Alina Chau*

**THE BEST WAY TO  
CONTACT ME IS  
VIA E-MAIL!**

**HAVE A WONDERFUL  
SCHOOL YEAR!!**

August 2009

Fall Semester

**Alina Chau**

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**Arts Blog:**

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**Book Release:**

[stores.lulu.com/alina\\_chau](http://stores.lulu.com/alina_chau)

**WOODBURY UNIVERSITY**

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