## **Cover Sheet: Request 15996**

## CAP 4XXX Computer Vision

Info	

Process	Course New Ugrad/Pro	
Status	Pending at PV - University Curriculum Committee (UCC)	
Submitter	Baba Vemuri vemuri@ufl.edu	
Created	3/18/2021 10:09:35 PM	
Updated	5/13/2021 4:36:38 PM	
Description of	I would like to request course approval for a new undergraduate course on Computer Vision	
request	meant for senior level undergraduate students in the CISE Department and anyone else in	
	WCOE and CLAS (majoring in Math or Statistics or Physics) who satisfy the listed prerequisites.	
	have already offered this class under special topics CIS4930 2 times before (2018 spring and	
	2019 spring) with great feedback from the students.	

Actions					
Step	Status	Group	User	Comment	Updated
Department	Approved	ENG - Computer and Information Science and Engineering 19140000	Christina Gardner-McCune		4/23/2021
No document o	hanges				
College	Approved	ENG - College of Engineering	Heidi Dublin	Approved by HWCOE Curriculum Committee and Faculty Council	5/13/2021
CVundergradS ConsultApprov	yl.docx al.pdf				5/3/2021 5/3/2021
University Curriculum Committee	Pending	PV - University Curriculum Committee (UCC)			5/13/2021
No document of	hanges				
Statewide Course Numbering System					
No document o	hanges				
Office of the Registrar					
No document o	hanges				
Catalog					
No document o	hanges				
Academic Support System					
No document o	hanges				
College Notified					
No document c	nanges				

## Course|New for request 15996

## Info

Request: CAP 4XXX Computer Vision

Description of request: I would like to request course approval for a new undergraduate course on Computer Vision meant for senior level undergraduate students in the CISE Department and anyone else in WCOE and CLAS (majoring in Math or Statistics or Physics) who satisfy the listed prerequisites. I have already offered this class under special topics CIS4930 2 times before (2018 spring and 2019 spring) with great feedback from the students. Submitter: Baba Vemuri vemuri@ufl.edu Created: 3/22/2021 9:13:13 PM Form version: 5

## Responses

#### **Recommended Prefix**

Enter the three letter code indicating placement of course within the discipline (e.g., POS, ATR, ENC). Note that for new course proposals, the State Common Numbering System (SCNS) may assign a different prefix.

Response: CAP

#### **Course Level**

Select the one digit code preceding the course number that indicates the course level at which the course is taught (e.g., 1=freshman, 2=sophomore, etc.).

Response: 4

#### **Course Number**

Enter the three digit code indicating the specific content of the course based on the SCNS taxonomy and course equivalency profiles. For new course requests, this may be XXX until SCNS assigns an appropriate number.

Response: XXX

#### **Category of Instruction**

Indicate whether the course is introductory, intermediate or advanced. Introductory courses are those that require no prerequisites and are general in nature. Intermediate courses require some prior preparation in a related area. Advanced courses require specific competencies or knowledge relevant to the topic prior to enrollment.

Response: Advanced

- 1000 level = Introductory undergraduate
- 2000 level = Introductory undergraduate
- 3000 level = Intermediate undergraduate
- 4000 level = Advanced undergraduate
- 5000 level = Introductory graduate
- 6000 level = Intermediate graduate
- 7000 level = Advanced graduate
- 4000/5000= Joint undergraduate/graduate
- 4000/6000= Joint undergraduate/graduate

\*Joint undergraduate/graduate courses must be approved by the UCC and the Graduate Council)

#### Lab Code

Enter the lab code to indicate whether the course is lecture only (None), lab only (L), or a combined lecture and lab (C).

Response: None

#### **Course Title**

Enter the title of the course as it should appear in the Academic Catalog. There is a 100 character limit for course titles.

Response: Computer Vision

#### **Transcript Title**

Enter the title that will appear in the transcript and the schedule of courses. Note that this must be limited to 30 characters (including spaces and punctuation).

Response: Computer Vision

#### **Degree Type**

Select the type of degree program for which this course is intended.

Response: Baccalaureate

**Delivery Method(s)** Indicate all platforms through which the course is currently planned to be delivered.

Response: On-Campus

#### **Co-Listing**

Will this course be jointly taught to undergraduate, graduate, and/or professional students?

Response: No

#### **Effective Term**

Select the requested term that the course will first be offered. Selecting "Earliest" will allow the course to be active in the earliest term after SCNS approval. If a specific term and year are selected, this should reflect the department's best projection. Courses cannot be implemented retroactively, and therefore the actual effective term cannot be prior to SCNS approval, which must be obtained prior to the first day of classes for the effective term. SCNS approval typically requires 2 to 6 weeks after approval of the course at UF.

Response: Spring

#### **Effective Year**

Select the requested year that the course will first be offered. See preceding item for further information.

Response: 2022

#### **Rotating Topic?**

Select "Yes" if the course can have rotating (varying) topics. These course titles can vary by topic in the Schedule of Courses.

Response: No

#### **Repeatable Credit?**

Select "Yes" if the course may be repeated for credit. If the course will also have rotating topics, be sure to indicate this in the question above.

Response: No

#### Amount of Credit

Select the number of credits awarded to the student upon successful completion, or select "Variable" if the course will be offered with variable credit and then indicate the minimum and maximum credits per section. Note that credit hours are regulated by Rule 6A-10.033, FAC. If you select "Variable" for the amount of credit, additional fields will appear in which to indicate the minimum and maximum number of total credits.

Response: 3

#### S/U Only?

Select "Yes" if all students should be graded as S/U in the course. Note that each course must be entered into the UF curriculum inventory as either letter-graded or S/U. A course may not have both options. However, letter-graded courses allow students to take the course S/U with instructor permission.

Response: No

#### **Contact Type**

Select the best option to describe course contact type. This selection determines whether base hours or headcount hours will be used to determine the total contact hours per credit hour. Note that the headcount hour options are for courses that involve contact between the student and the professor on an individual basis.

Response: Regularly Scheduled

- Regularly Scheduled [base hr]
- Thesis/Dissertation Supervision [1.0 headcount hr]
- Directed Individual Studies [0.5 headcount hr]
- Supervision of Student Interns [0.8 headcount hr]
- Supervision of Teaching/Research [0.5 headcount hr]
- Supervision of Cooperative Education [0.8 headcount hr]

Contact the Office of Institutional Planning and Research (352-392-0456) with questions regarding contact type.

#### **Weekly Contact Hours**

Indicate the number of hours instructors will have contact with students each week on average throughout the duration of the course.

Response: 3

#### **Course Description**

Provide a brief narrative description of the course content. This description will be published in the Academic Catalog and is limited to 500 characters or less. See course description guidelines.

#### Response:

This is an introductory course on computer vision and is intended for senior level undergraduate students who want to delve into this exciting and challenging sub-field of AI. Students will learn the basics of computer vision starting with how camera images are formed and how algorithms can take this images in digital form and manipulate them to, infer the content of the image, track objects in videos for surveillance applications or perform morphometric analysis.

#### Prerequisites

Indicate all requirements that must be satisfied prior to enrollment in the course. Prerequisites will be automatically checked for each student attempting to register for the course. The prerequisite will be published in the Academic Catalog and must be formulated so that it can be enforced in the registration system. Please note that upper division courses (i.e., intermediate or advanced level of instruction) must have proper prerequisites to target the appropriate audience for the course.

Courses level 3000 and above must have a prerequisite. Please verify that any prerequisite courses listed are active courses.

Response: COT4501(B) or MAD4401(B), COT3100(B) and proficiency in MATLAB or Python. Engineering (WCOE) CLAS (Majors: Math, Statistics, Physics)

Completing Prerequisites on UCC forms:

• Use parentheses to specify groupings in multiple requirements.

• Specify all majors or minors included (if all majors in a college are acceptable the college code is sufficient).

• "Permission of department" is always an option so it should not be included in any prerequisite or co-requisite.

<sup>•</sup> Use "&" and "or" to conjoin multiple requirements; do not used commas, semicolons, etc.

<sup>•</sup> Specifying a course prerequisite (without specifying a grade) assumes the required passing grade is D-. In order to specify a different grade, include the grade in parentheses immediately after the course number. For example, "MAC 2311(B)" indicates that students are required to obtain a grade of B in Calculus I. MAC2311 by itself would only require a grade of D-.

• If the course prerequisite should list a specific major and/or minor, please provide the plan code for that major/minor (e.g., undergraduate Chemistry major = CHY\_BS, undergraduate Disabilities in Society minor = DIS\_UMN)

Example: A grade of C in HSC 3502, passing grades in HSC 3057 or HSC 4558, and undergraduate PBH student should be written as follows: HSC 3502(C) & (HSC 3057 or HSC 4558) & UGPBH & hbsp;

#### **Co-requisites**

Indicate all requirements that must be taken concurrently with the course. Co-requisites are not checked by the registration system. If there are none please enter N/A.

Response: None

#### **Rationale and Placement in Curriculum**

Explain the rationale for offering the course and its place in the curriculum.

#### Response:

Computer Vision is major subfield of Artificial Intelligence (AI) and is considered to be one of the most challenging of the subfields in AI. Computer Vision is currently having an explosive growth especially since the unprecedented success of deep neural networks in image classification and recognition tasks on image databases with millions of images. Computer Vision algorithms are used in a variety of applications including but not limited to, automated face detection is cell phone cameras, automated driving, a slew of functions in our cars (lane change detection etc), medical diagnosis assistance from images, sports vision examples include, automated placement of line of scrimmage in football, generation of panoramic views in cameras, photo-tourism, surveillence applications etc. A course that will train our undergraduates in this exciting field of AI will be very beneficial to the students not only in seeking employment in industry but also those who are seeking to continue to graduate school.

#### **Course Objectives**

Describe the core knowledge and skills that student should derive from the course. The objectives should be both observable and measurable.

#### Response:

The goal of Computer Vision is to develop methods that enable a machine to "understand" or analyze images and videos. In this introductory computer vision course, we intend to explore several fundamental topics in the field ranging from low-level feature extraction to high-level visual recognition. This will give the student the basic tools necessary to build an automated visual classification/recognition system.

After covering the fundamentals for image processing, grouping, and multiple views, the course will focus on machine learning-based methods, specifically for supervised learning and classification. Although the concepts are motivated from a computer vision perspective, the learning algorithms we will study are useful general tools for other domains in AI and beyond.

#### Course Textbook(s) and/or Other Assigned Reading

Enter the title, author(s) and publication date of textbooks and/or readings that will be assigned. Please provide specific examples to evaluate the course and identify required textbooks.

Response: Text Book: Computer Vision: Algorithms and Applications, Edition-2, Author: Richard Szeliski. Recommended Book: Title: Multiple View Geometry in Computer Vision Authors: Richard Hartley and Andrew Zisserman

#### Weekly Schedule of Topics

Provide a projected weekly schedule of topics. This should have sufficient detail to evaluate how the course would meet current curricular needs and the extent to which it overlaps with existing courses at UF.

#### Response:

Weeks 1 and 2: Geometry of Image Formation (Perspective and Orthographic Projections), Camera as a measuring device and camera calibration.

Weeks 3 and 4: Image sampling and Fourier transforms, multi-resolution pyramids, convolution and correlation filters..

Weeks 5 and 6 : Image resizing fixed and adaptive methods; image stitching for panoramas

Weeks 7 and 8: Midterm , Image denosing and segmentation

Weeks 9 and 10: Scale invariant feature extraction and image-based motion estimation from videos for tracking

Weeks 11 and 12: Supervised learning for recognition and deep neural networks

Weeks 13 and 14: Wrap up and project presentation.

#### **Grading Scheme**

List the types of assessments, assignments and other activities that will be used to determine the course grade, and the percentage contribution from each. This list should have sufficient detail to evaluate the course rigor and grade integrity. Include details about the grading rubric and percentage breakdowns for determining grades. If participation and/or attendance are part of the students grade, please provide a rubric or details regarding how those items will be assessed.

Response: Programming Assignments: 30%

Written Assignments: 20%

Midterm: 20%

Final Project: 30%

#### Instructor(s)

Enter the name of the planned instructor or instructors, or "to be determined" if instructors are not yet identified.

Response: Baba C Vemuri

#### Attendance & Make-up

Please confirm that you have read and understand the University of Florida Attendance policy. A required statement statement related to class attendance, make-up exams and other work will be included in the syllabus and adhered to in the course. Courses may not have any policies which conflict with the University of Florida policy. The following statement may be used directly in the syllabus.

• Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at: https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx

Response: Yes

#### Accomodations

Please confirm that you have read and understand the University of Florida Accommodations policy. A statement related to accommodations for students with disabilities will be included in the syllabus and adhered to in the course. The following statement may be used directly in the syllabus:

• Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Response: Yes

#### **UF Grading Policies for assigning Grade Points**

Please confirm that you have read and understand the University of Florida Grading policies. Information on current UF grading policies for assigning grade points is require to be included in the course syllabus. The following link may be used directly in the syllabus:

https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

Response	e:
Yes	

#### **Course Evaluation Policy**

Course Evaluation Policy

Please confirm that you have read and understand the University of Florida Course Evaluation Policy. A statement related to course evaluations will be included in the syllabus. The following statement may be used directly in the syllabus:

• <span style="font-size:11.0pt">Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at&nbsp;<u>https://gatorevals.aa.ufl.edu/public-results/</u>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via&nbsp;<a href="https://ufl.bluera.com/ufl/" target="\_blank">https://ufl.bluera.com/ufl/</a>. Summaries of course evaluation results are available to students at&nbsp;<a href="https://ufl.bluera.com/ufl/" target="\_blank">https://ufl.bluera.com/ufl/</a>. Summaries of course evaluation results are available to students at&nbsp;<a href="https://gatorevals.aa.ufl.edu/public-results/</a>.

Response: Yes

## Computer Vision CAP XXXX Section 1234 Class Periods: TTH, 8, 9 Location: TBD Academic Term: Spring 2022

### Instructor:

Name: Baba C. Vemuri <u>Email Address: vemuri@ufl.edu</u> Office Phone Number: 352-294-6675 Office Hours: TBD

## Teaching Assistant/Peer Mentor/Supervised Teaching Student: TBD

Please contact through the Canvas website

- Name, email address, office location, office hours
- Name, email address, office location, office hours

## **Course Description**

(3 Credits) Computer Vision is an exciting and challenging sub-field of AI. Students will learn the basics of Computer Vision starting with how camera images are formed and how algorithms can take these images in digital form and process them to, infer the content of the image, track objects from videos for surveillance applications or perform morphometric analysis.

## Course Pre-Requisites / Co-Requisites

Students are expected to have the following pre-requisites: COT4501 or MAD4401, COT3100 and proficiency in MATLAB or Python. Engineering (WCOE) CLAS (Majors: Math, Statistics, Physics)

## **Course Objectives**

The goal of Computer Vision is to develop methods that enable a machine to "understand" or analyze images and videos. In this introductory computer vision course, we intend to explore several fundamental topics in the field ranging from low-level feature extraction to high-level visual recognition. This will give the student the basic tools necessary to build an automated visual classification/recognition system. After covering the fundamentals of image formation, processing, grouping, and multiple views, the course will focus on machine learning-based methods, specifically for supervised learning and classification. Although the concepts are motivated from a Computer Vision perspective, the learning algorithms we will study are useful general tools for other domains in AI and beyond.

# Materials and Supply Fees None

## Relation to Program Outcomes (ABET):

Outcome		Coverage*
1.	An ability to identify, formulate, and solve complex	Medium
	engineering problems by applying principles of	
	engineering, science, and mathematics	
2.	An ability to apply engineering design to produce	N/A
	solutions that meet specified needs with	

	consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors	
3.	An ability to communicate effectively with a range of audiences	Medium
4.	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts	N/A
5.	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives	Medium
6.	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions	High
7.	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies	High

## Required Textbooks and Software

Title : Computer Vision Algorithms and Applications.

- Author : Richard Szeliski
- Publication date and edition 2021, Second Edition
- ISBN number: ISBN 978-3-030-34372-9

### **Recommended Materials**

- Title : Multiple View Geometry in Computer Vision
- Author : Richard Hartley and Andrew Zisserman
- Publication date and edition : 2004; Second Edition
- ISBN number: 0521540518

Software: (a) Matlab with Computer Vision toolbox. (b) Python/Pytorch via student's HiperGator account.

## Course Schedule

Weeks 1: Geometry of Image Formation (Perspective and Orthographic Projections),

Week 2: Camera as a measuring device and camera calibration Hwk#1 due

Week 3: Shannon's Sampling and Fourier Transforms

Week 4: Compressed Sensing and Reconstruction **Program #1 Due** 

Week 5: Multi-resolution Pyramids, Convolution Filters

Week 6: Image Resizing and Panoramas Hwk #2 due

Week 7 : Recap and Midterm-1

## Week 8: Diffusion Filtering Program#2 due

Week 9: Active Contours for Interactive Segmentation

Week 10: Deep Neural Networks for Semantic Segmentation Hwk #3 due

Week 11: Motion estimation and Optical Flow **Project selection (from a provided list) and description writeup due.** 

Week 12: Supervised Learning and Dimensionality Reduction

Week 13: Deep Convolutional Neural Networks for Image Classification

Week 14: Advanced Topics and Applications of Computer Vision e.g., Health Care. Program# 3 due

Week 15: Project Presentations. This will entail a short and concise presentation of results of implementation of existing algorithms in literature.

## Attendance Policy, Class Expectations, and Make-Up Policy

Classroom attendance is highly encouraged of all registered students. No late homework policy. Late submissions for programs will be penalized: One day late will cost 15%, 2 days late will cost 30%. No late submissions beyond 2 days. Make up exams will be allowed only if the student is ill and shows documentation in the form of a letter/note from the Doctor. Excused absences must be consistent with university policies (https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx) documentation.

## **Evaluation of Grades**

Assignment	<b>Total Points</b>	Percentage of Final Grade
Homework Sets (3)	100 each	20%
Programs (3)	100 each	30%
Midterm Exam	100	20%
Final Project	100	30%
		100%

**Notes on Grading:** Individual assignments will not be graded on a curve. Final course grades will be graded on a curve. Homework will include written mathematical problem sets on material covered in class. Programming assignments will entail code development for algorithms described in class or variants thereof, and testing on images. Midterm will be based on the homework problem sets and possible variants. Projects are individual and a team project with a team of two maybe allowed depending on the enrollment size.

## **Grading Policy**

The following is given as an example only.

Percent	Grade	Grade
		Points
93.4 - 100	А	4.00
90.0 - 93.3	A-	3.67
86.7 - 89.9	B+	3.33
83.4 - 86.6	В	3.00
80.0 - 83.3	B-	2.67
76.7 - 79.9	C+	2.33
73.4 - 76.6	С	2.00
70.0 - 73.3	C-	1.67
66.7 - 69.9	D+	1.33
63.4 - 66.6	D	1.00
60.0 - 63.3	D-	0.67
0 - 59.9	Е	0.00

More information on UF grading policy may be found at: <u>https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx</u>

## Students Requiring Accommodations

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting <u>https://disability.ufl.edu/students/get-started/</u>. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

## **Course Evaluation**

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <a href="https://gatorevals.aa.ufl.edu/students/">https://gatorevals.aa.ufl.edu/students/</a>. Students will be notified when the

evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <u>https://ufl.bluera.com/ufl/</u>. Summaries of course evaluation results are available to students at <u>https://gatorevals.aa.ufl.edu/public-results/</u>.

## University Honesty Policy

UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (<u>https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/</u>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

## Commitment to a Safe and Inclusive Learning Environment

The Herbert Wertheim College of Engineering values broad diversity within our community and is committed to individual and group empowerment, inclusion, and the elimination of discrimination. It is expected that every person in this class will treat one another with dignity and respect regardless of gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture.

If you feel like your performance in class is being impacted by discrimination or harassment of any kind, please contact your instructor or any of the following:

- Your academic advisor or Graduate Program Coordinator
- Robin Bielling, Director of Human Resources, 352-392-0903, <u>rbielling@eng.ufl.edu</u>
- Curtis Taylor, Associate Dean of Student Affairs, 352-392-2177, <u>taylor@eng.ufl.edu</u>
- Toshikazu Nishida, Associate Dean of Academic Affairs, 352-392-0943, <u>nishida@eng.ufl.edu</u>

## Software Use

All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

## Student Privacy

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see: <u>https://registrar.ufl.edu/ferpa.html</u>

## Campus Resources:

## <u>Health and Wellness</u>

## U Matter, We Care:

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact <u>umatter@ufl.edu</u> so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

**Counseling and Wellness Center:** <u>http://www.counseling.ufl.edu/cwc</u>, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

## Sexual Discrimination, Harassment, Assault, or Violence

If you or a friend has been subjected to sexual discrimination, sexual harassment, sexual assault, or violence contact the <u>Office of Title IX Compliance</u>, located at Yon Hall Room 427, 1908 Stadium Road, (352) 273-1094, <u>title-ix@ufl.edu</u>

Sexual Assault Recovery Services (SARS)

Student Health Care Center, 392-1161.

University Police Department at 392-1111 (or 9-1-1 for emergencies), or http://www.police.ufl.edu/.

### Academic Resources

**E-learning technical suppor***t*, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. https://lss.at.ufl.edu/help.shtml.

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling. https://www.crc.ufl.edu/.

**Library Support**, <u>http://cms.uflib.ufl.edu/ask</u>. Various ways to receive assistance with respect to using the libraries or finding resources.

**Teaching Center**, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. <u>https://teachingcenter.ufl.edu/</u>.

**Writing Studio, 302 Tigert Hall**, 846-1138. Help brainstorming, formatting, and writing papers. <u>https://writing.ufl.edu/writing-studio/</u>.

Student Complaints Campus: https://care.dso.ufl.edu.

**On-Line Students Complaints**: <u>http://www.distance.ufl.edu/student-complaint-process</u>.

Subject: Re: Consult on undergraduate Computer Vision course required by HWCOE curriculum committee
From: "Harris, John Gregory" <harris@ece.ufl.edu>
Date: 5/3/21, 12:59 PM
To: "Vemuri, Baba C" <vemuri@ufl.edu>
CC: "Gardner-McCune, Christina" <gmccune@ufl.edu>, "Fox, Robert M" <fox@ece.ufl.edu>

Hi Baba,

This looks like a great course. In ECE we have some related courses but there is not enough overlap to be an issue.

ECE is completely fine with your course. Good luck with it!

John

John G. Harris, Professor and Chair Department of Electrical and Computer Engineering 216 Larsen Hall, P.O. Box 116200 University of Florida, Gainesville, FL 32611-6200 www.ece.ufl.edu, harris@ece.ufl.edu, (352) 392-0913

On May 2, 2021, at 4:33 PM, Vemuri, Baba C <<u>vemuri@ufl.edu</u>> wrote:

Hi John,

I am proposing an undergraduate Computer Vision class CAP4XXX, which I have offered in the past as a special topics class in 2018 and 2019 spring respectively. I was asked by my my curriculum committee chair and rep. for the college from CISE dept. (Christina Gardner-McCune) to obtain a consult from ECE department since the College curriculum apparently asked for the same.

I noticed that there is no undergraduate computer vision class in ECE at this time. I hope I can get your approval on this soon as the HWCOE curriculum committee meets tomorrow at 3.30pm to discuss the courses. I do not know who the ECE curriculum chair is and hence am not Ccing to her/him.

I am attaching the proposed course details to this email for your perusal.

best

baba

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Baba C Vemuri Wilson and Marie Collins Professor of Engineering Department of CISE University of Florida Gainesville, Fl. 32611 <u>email:vemuri@ufl.edu</u> Phone Number:352-294-6675

<CVundergradSyl.docx>