

Professional Evaluation and Growth Plan

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Contents

1	Introduction	4
1.1	My Background	4
1.1.1	Academic Origins	4
1.1.2	My Family and East Los Angeles	4
1.2	Progress at Whittier College	4
1.3	Scope of this Report	4
2	Impact of COVID-19	5
2.1	Keeping a Sense of Humor under Quarantine	5
2.2	Growing our Family during the Pandemic	5
2.3	Working from Home with Children	5
2.4	Tenacity and Adaptation	5
3	Teaching	6
3.1	Teaching Philosophy: A Philosophy of Growth	6
3.2	Addressing Equity and Inclusion	6
3.2.1	Open Educational Resources (OER)	6
3.2.2	Making Arrangements for a Diverse Group of Students	6
3.2.3	Engaging with the Center for Engagement with Communities: Artemis Program	6
3.2.4	Influences on Course Creation: Latin American Science	6
3.3	Methods of Teaching Physics	6
3.3.1	Physics Education Research (PER) Modules	6
3.3.2	Traditional Teaching Modules	6
3.3.3	Laboratory Modules	6
3.3.4	Online Modules	6
3.4	Introductory Course Descriptions	7
3.5	Analysis of Course Evaluations: Introductory Courses	7
3.6	Advanced Course Descriptions	7
3.7	Analysis of Course Evaluations: Advanced Courses	7
3.8	Liberal Arts Course Descriptions	7
3.9	Analysis of Course Evaluations: Liberal Arts Courses	7
3.10	College Writing Seminar Course Descriptions	7
3.11	Analysis of Course Evaluations: College Writing Seminar	8
3.12	Outlook	8
4	Scholarship	9
4.1	The History of IceCube, Cosmic Rays, and Neutrinos from Deep Space	9
4.1.1	Why Antarctica?	9
4.1.2	Radio Expansions: IceCube Generation 2	9
4.2	My Professional Background	9
4.2.1	Prior to Whittier College	9
4.2.2	Successes with Our Students at Whittier College	9
4.2.3	Forming Connections with the Office of Naval Research (ONR)	9
4.3	Five Areas of Research Focus	9
4.3.1	Computational Electromagnetism	9
4.3.2	Mathematical Physics	10
4.3.3	Firmware, Software, and Hardware Development	10

4.3.4	Open-source Antenna Design	10
4.3.5	Drone Development and The Whittier Scholars Program	10
4.4	Invitation to Become a Member Institution of IceCube	10
4.5	CEM and Engineering with the ONR	10
4.5.1	CEM Phased Array Design for Radar	10
4.5.2	3D Printing of RF Antennas	10
4.5.3	Connections to Neutrino Physics Research	10
4.5.4	Broader Applications	10
4.6	My Vision for Collaboration between ONR and Whittier College	10
4.6.1	Building Student Success after Whittier College	10
4.6.2	Equipping Whittier College Laboratories	10
4.6.3	Financial Support	10
5	Advising and Mentoring	11
5.1	Connections to Teaching and Service	11
5.1.1	Inclusion, Community, and a Sense of Belonging	11
5.2	Advising and Mentoring First Year Students	11
5.2.1	First Year Advising, by the Numbers	11
5.2.2	Navigating the First Year	11
5.2.3	Discernment of Major	11
5.2.4	Equity of Access	11
5.2.5	Inclusion and Belonging: Activities with First Year Advisees	11
5.3	Advising and Mentoring Majors in Physics, ICS, and 3-2 Engineering	11
5.3.1	Discernment within STEM: Major Selection, and Diverse Pathways to Graduation	11
5.3.2	Graduate School	11
5.3.3	Private Sector	12
5.3.4	Letters of Recommendation	12
5.4	Advising and Mentoring Whittier Scholars Program Majors	12
5.4.1	Interdisciplinary Connections and Recruiting Students	12
5.4.2	Organization of Field Deployments	12
5.4.3	Organizing the Program of Study and Executing	12
5.4.4	Polishing the Finished Product	12
6	Service	13
6.1	Committee Service	13
6.1.1	Enrollment and Student Affairs Committee, Year 1	13
6.1.2	Enrollment and Student Affairs Committee, Year 2	13
6.1.3	Educational Resources and Digital Liberal Arts Committee	13
6.1.4	Whittier Scholars Program Advisory Board	13
6.2	Departmental Service	13
6.2.1	Departmental Self-Study	13
6.2.2	Departmental Annual Assessment	13
6.3	First Year Orientation	13
6.3.1	Connection to Teaching and Advising	13
6.3.2	Inclusion and Belonging	13
6.4	Open Educational Resources (OER) Workshops	14
6.4.1	Open Educational Resources (OER) and Equity	14
6.4.2	The Tradition of Open Access/Open Source in STEM	14
6.4.3	Lectures at Wardman Library Collaboratory	14
6.5	Center for Engagement with Communities: The Artemis Program	14
6.5.1	Open Educational Resources (OER) and Equity	14
6.5.2	The Tradition of Open Access/Open Source in STEM	14
6.5.3	Lectures at Wardman Library Collaboratory	14
6.6	Summer Working Group Contribution	14
7	Conclusion	15
8	Supporting Materials	16

Chapter 1

Introduction



Opening words.

1.1 My Background

1.1.1 Academic Origins

1.1.2 My Family and East Los Angeles

1.2 Progress at Whittier College

1.3 Scope of this Report

Chapter 2

Impact of COVID-19

A

2.1 Keeping a Sense of Humor under Quarantine

A

2.2 Growing our Family during the Pandemic

A

2.3 Working from Home with Children

A

2.4 Tenacity and Adaptation

A

Chapter 3

Teaching

3.1 Teaching Philosophy: A Philosophy of Growth

A

Elec

B

3.2 Addressing Equity and Inclusion

A

3.2.1 Open Educational Resources (OER)

B

3.2.2 Making Arrangements for a Diverse Group of Students

C (10to8) (Take-home tests) (Flexibility) (Arranging assessment schedule) (Take-home final projects)

3.2.3 Engaging with the Center for Engagement with Communities: Artemis Program

3.2.4 Influences on Course Creation: Latin American Science

3.3 Methods of Teaching Physics

A

3.3.1 Physics Education Research (PER) Modules

B

3.3.2 Traditional Teaching Modules

C

3.3.3 Laboratory Modules

D

3.3.4 Online Modules

E

3.4 Introductory Course Descriptions

Don't forget intro to statistics!

Algebra-Based Physics

B

3.5 Analysis of Course Evaluations: Introductory Courses

A

Hickisy Pickisy

B

3.6 Advanced Course Descriptions

A

Elec

B

3.7 Analysis of Course Evaluations: Advanced Courses

A

Elec

B

3.8 Liberal Arts Course Descriptions

A

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B

3.9 Analysis of Course Evaluations: Liberal Arts Courses

A

Elec

B

3.10 College Writing Seminar Course Descriptions

A

Elec

B

3.11 Analysis of Course Evaluations: College Writing Seminar

A

Elec

B

3.12 Outlook

A

Elec

B

Chapter 4

Scholarship

A

4.1 The History of IceCube, Cosmic Rays, and Neutrinos from Deep Space

B

4.1.1 Why Antarctica?

C

4.1.2 Radio Expansions: IceCube Generation 2

D

4.2 My Professional Background

E

4.2.1 Prior to Whittier College

F

4.2.2 Successes with Our Students at Whittier College

G

4.2.3 Forming Connections with the Office of Naval Research (ONR)

H

A

4.3 Five Areas of Research Focus

B

4.3.1 Computational Electromagnetism

C

4.3.2 Mathematical Physics

D

4.3.3 Firmware, Software, and Hardware Development

E

4.3.4 Open-source Antenna Design

F

4.3.5 Drone Development and The Whittier Scholars Program

G

4.4 Invitation to Become a Member Institution of IceCube

H

A

4.5 CEM and Engineering with the ONR

B

4.5.1 CEM Phased Array Design for Radar

C

4.5.2 3D Printing of RF Antennas

D

4.5.3 Connections to Neutrino Physics Research

E

4.5.4 Broader Applications

F

Don't forget the italians. A

4.6 My Vision for Collaboration between ONR and Whittier College

B

4.6.1 Building Student Success after Whittier College

C

4.6.2 Equipping Whittier College Laboratories

D

4.6.3 Financial Support

E

Chapter 5

Advising and Mentoring

5.1 Connections to Teaching and Service

5.1.1 Inclusion, Community, and a Sense of Belonging

5.2 Advising and Mentoring First Year Students

A

5.2.1 First Year Advising, by the Numbers

B

5.2.2 Navigating the First Year

C

5.2.3 Discernment of Major

D

5.2.4 Equity of Access

E

5.2.5 Inclusion and Belonging: Activities with First Year Advisees

5.3 Advising and Mentoring Majors in Physics, ICS, and 3-2 Engineering

A

5.3.1 Discernment within STEM: Major Selection, and Diverse Pathways to Graduation

B

5.3.2 Graduate School

C

5.3.3 Private Sector

D

Reverse Engineering Social Media

E

5.3.4 Letters of Recommendation

F

5.4 Advising and Mentoring Whittier Scholars Program Majors

A

5.4.1 Interdisciplinary Connections and Recruiting Students

B

5.4.2 Organization of Field Deployments

C

United States Antarctic Program

Describe the attempt to deploy Nicolas to Antarctica

5.4.3 Organizing the Program of Study and Executing

E

5.4.4 Polishing the Finished Product

F

Chapter 6

Service

6.1 Committee Service

A

6.1.1 Enrollment and Student Affairs Committee, Year 1

B

6.1.2 Enrollment and Student Affairs Committee, Year 2

Write about how I learned about orientation issues from these meetings
Interactions with Falone Serna

6.1.3 Educational Resources and Digital Liberal Arts Committee

Creation of senior thesis archival program

6.1.4 Whittier Scholars Program Advisory Board

I was invited! Sort of.

6.2 Departmental Service

This one can be stronger, maybe

6.2.1 Departmental Self-Study

6.2.2 Departmental Annual Assessment

6.3 First Year Orientation

A

6.3.1 Connection to Teaching and Advising

B

6.3.2 Inclusion and Belonging

C

6.4 Open Educational Resources (OER) Workshops

openstax, oercommons, and openstax tutor, dspguide.com

6.4.1 Open Educational Resources (OER) and Equity

6.4.2 The Tradition of Open Access/Open Source in STEM

The OpenStax Platform

Integrations with Machine Learning

Open Access in Digital Signal Processing

6.4.3 Lectures at Wardman Library Collaboratory

6.5 Center for Engagement with Communities: The Artemis Program

openstax, oercommons, and openstax tutor, dspguide.com

6.5.1 Open Educational Resources (OER) and Equity

6.5.2 The Tradition of Open Access/Open Source in STEM

The OpenStax Platform

Integrations with Machine Learning

Open Access in Digital Signal Processing

6.5.3 Lectures at Wardman Library Collaboratory

6.6 Summer Working Group Contribution

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B

Chapter 7

Conclusion

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Chapter 8

Supporting Materials