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An 8-Week Yoga Program to Support
Undergraduate Academic Aptitude

By

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A research paper presented to the

Faculty of the Department of Yoga Studies
Loyola Marymount University

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Master of Arts in Yoga Studies

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Purpose Statement

Derived from the ancient mind-body practice and congruent with western scientific studies, the *8-Week Program to Support Undergraduate Academic Aptitude* draws specific modalities from the 5,000-year-old Yoga tradition for helping lower undergraduate anxiety, depression, and stress. The program emphasizes use of physical postures, breathing exercises, basic mediation, and philosophy. Selectively chosen, the clinically researched techniques create physiological shifts for offsetting anxiety and depression in undergraduates, two factors known for adversely affecting students' health and academic readiness (Breedvelt, Elam, Tripathi). The main goal of the program is to educate a student to use Yogic tools intelligently and effectively for emotional, mental, and physical health to support quality of life and flourishing academically. A student's health, wellness, and happiness are key contributing factors to staying engaged with an institution and student attainment.

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Literature Review:

There is a direct correlation between the mental, physical, and emotional health of a student and their ability to adapt, assimilate, and achieve as an undergraduate (Eisenburg et al., 2009; Heo et. al., 2022). Additionally, a considerable number of undergraduates face challenges when adapting to campus culture. According to the systematic review and meta-analysis entitled “The prevalence of depressive symptoms, anxiety symptoms and sleep disturbance in higher education during the COVID-19 pandemic” the following three challenges stand out. The prevalence of depressive symptoms among higher education students is 34 percent. The prevalence of anxiety symptoms among higher education students is 32 percent. The prevalence of sleep disturbances among higher education students is 33 percent (2021).

In support of the above statistics, the *Journal of Medical Internet Research (JMIR)* found 71% of 195 students experienced increase in stress and anxiety and 82% had increased concerns regarding their academic performance since COVID (Son et al, 2020). Although the *JMIR* report is a small sampling of students, the extreme response to increased levels of anxiety and concern for academic performance are significant. Mental health issues resulting in impediment to academic success is not exclusive to the effects of COVID. Prevalence of the correlation predates the pandemic in the US and Canada considers poor mental health a hindrance to student performance (Eisenburg, et al 2009; Zelmar, 2016).

Fostering the stability of students may also bring stability to the institution. According to the National Student Clearinghouse Research Center, on average only 61.7% of students remain at the same institution of learning the first year through graduation. Additionally, the challenge

of student anxiety, depression, and retention may be a self-correcting one. There is an on-going ten-year population trend in undergraduates seeking mental health through their own initiative (Lipson, et al, 2019). The following 8-week Yoga program works to explore and support the growing interest in undergraduates' interest in seeking self-care out of a personal desire for better health and wellness. Key components of the program address the acknowledgment that successful learning engagement includes the lack of depression and self-efficacy for in person and blended learning (Heo et al, 2022).

Derived from the ancient mind-body practice and congruent with western scientific studies, the *8-Week Program to Support Undergraduate Academic Aptitude* draws specific modalities from the ancient tradition specific clinically shown to lower undergraduate anxiety, depression, and stress (Breedvelt, et al. 2020; Kathapillai, 2019; Paul, et al. 2007; Sinha, et al 2013; Tripathi, et al., 2018). The program focuses educating students in the intelligent use of physical postures, breathing exercises, and a basic mediation for self-efficacy optimizing their health and wellbeing. The postures, breathwork, and meditation chosen for the program take into consideration student ergonomics (i.e., sitting, typing, reading for prolonged periods), mental challenges (processing and assimilating lots of information), and emotional challenges (being newly independent, away from family, processing new experiences).

Additionally, students will be introduced to universally applicable health related Yogic philosophies bring awareness to common triggers for anxiety and depression (i.e. lack of sleep, unbalanced blood sugar levels, poor hydration, poor posture, poor breathing technique) and ways to counter-balance habits and patterns for improved health and wellness (Hanaa, 2019; Misra and McKean, 2000; Riccobono, et al., 2020). Through experiential learning, collaborative

learning, and practicing nonjudgmental self-awareness, the practice of mindfulness based Yogic exercises for self-intervention, self-regulation, and emotional intelligence will support emotional, mental, physical, and social development (Gokcen, 2017).

Participants:

Accessibility to the class will be available to all students regardless of physical abilities. Lead by an experienced and certified Yoga instructor, all postures, breathwork, and meditations are customizable under professional guidance. This allows placing emphasis on the sought physiological shift rather than the specific execution of a posture, breathwork, or meditation. For example, if the class is engaging in diaphragmatic breathing exercises and a student is having difficulty with sitting upright due to low back fatigue from intern work in a pre-school earlier in the day, the instructor can suggest the participant lay on the ground, so they do not have to use both the stabilizing back muscles in addition to the diaphragm in order to engage in diaphragmatic breathing. Ensuring an experienced and certified Yoga instructor is leading the class will allow for the opportunity for safe modifications to be made as needed.

In addition to College Learning Effectiveness Inventory (CLEI) for academic aptitude, Perceived Stress Scale (PSS) for anxiety and depression, and The Beck Depression Inventory (BDI) for depression. The measurement of student success will take into consideration their participation verses strict standards regarding the execution of their activities. All participants progress will be from their baselines for physical, mental, and emotional health. Keeping the class focus on learning and applying yogic techniques for self-efficacy, places emphasis on the customization of the material. Intelligently and effectively cultivating emotional, mental, and

physical health for self-cultivation supersedes the degree to which an individual can execute the techniques.

Goals:

The goals of the program are support the student's quality of life and academic endeavors through the intelligent use of yogic tools. The tools address fostering self-efficacy to counterbalance statistically typically challenges such as anxiety and depression through the holistic practices of postures (*āsana*), breathwork (*prāṇāyāma*), meditation, reflective journaling, and some yogic philosophies with universal application. The College Learning Effectiveness Inventory, and Depressed Perceived Stress Scale, will factor in determining the effectiveness of the program.

Valid Evaluations:

Sound mental health correlates with academically achievement according to the College Learning Effectiveness Inventory (CLEI). For the past two decades the empirical approach of the CLEI remains grounded in a conceptual model. It focuses on six areas: academic self-study, organization and attention to study, stress and time press, involvement with college activity, emotional satisfaction, and class communication. These underlying factors are the result of exploratory and confirmatory studies by researchers Kim, Eunhee; Newton, Fred B.; Downey, Ronald G.; Benton, Stephen L.

The Perceived Stress Scale's (PSS) developer Cohen et al. (1983) is known for developing one of the most widely used psychological instruments and multiple studies as a scale to measure the effectiveness of stress-reducing interventions (Cohen, 1994; Lane, et al., 2007;

Marcus, et al., 2003). Those who score higher on the PSS are typically also exhibit higher levels of the stress hormone cortisol, a hormone linked to anxiety disorders (LeMoult, et al., 2020; Lenze, et al. 2011; Malarkey, et al., 1995).

The Beck Depression Inventory-II (BDI-II) originates from the most widely used psychometric test for measuring the severity of depression. Appropriate for individuals thirteen and older, BDI-II evaluates thoughts, feelings, and physical symptoms. The creator, Aaron T. Beck, acknowledges the link between cognitive behavioral therapy (CBT) and medical disorders stating he originally thought it “impossible to target (medical disorders) with psychotherapy. These include diabetes, dementia, hypertension, irritable bowel syndrome, insomnia, and skin diseases” (Beck, 2019). The evaluation reflects the body, mind, emotion link.

Students will take the College Learning Effectiveness Inventory (CLEI), Perceived Stress Scale (PSS), and Beck Depression Inventory-II (BDI-II) prior participating in the 8-week course. Upon the completion of the course, they will take it again to assess the program’s effectiveness.

Additionally, class participation, demonstration of the intelligent use of postures, breathwork, and mediation, as well as completed journal entries will factor into the successful completion of the course material. Introduction of the weekly course content will take place the first time the class meets, and the second meeting will exercise information retention through independent practice, practicing with a partner, and or practicing in small groups depending on students’ needs and special considerations. Experiential learning enhances students’ ability to adapt information while simultaneously developing emotional intelligence (Etkina, 2002; Hofer, and Pintrich, 1997).

Programs Practices: *Dinacharya*

Finally, students will work on emotional intelligence development by self-evaluation journaling. Tracking use of the Yoga tools and philosophies with simple check box-based reflection will trend their use of the material. Facilitating a way for participants to evaluate their levels of stress/tension and respond constructively can cultivate unbiased self-awareness (Riccobono, et al., 2020). Establishing physiologically supportive routines in response to and in rhythm with ones' environment is known as *dinacharya*.

The practice of *dinacharya* comes from the tradition of *Ayurveda*. The use of postures, breathwork, and meditation in addition to flexible daily routines regarding nutrition, sleep, and self-reflection are components of a *dinacharya* practice. To help participants successfully create and explore a *dinacharya* practice detailed information on all the postures, breathwork, and meditations are available to encourage independent practice. All practices are customizable so ones' unique demands for the day can be met with increased equanimity through the customization of the practice.

The "Daily Journal" tracks sleep, nutrition (for the purpose of maintaining healthy blood sugar levels, not to count calories), hydration, and stress/tension. The "Daily Journal: Yoga Practices" tracks use of the techniques taught in the course. Both journals support of the goals of the program as well as the markers for measuring student success in the College Learning Effectiveness Inventory (CLEI). The following information explores the health and wellness benefits of journal categories. For additional clarification regarding the Yogic philosophies' representative in the journals, please refer to the **Applied Yoga Philosophy** section (pg. 23).

Personal Evaluation Journals, *Dinacharya*

- a. Keeping a sleeping schedule.
- b. Practicing regular eating and hydration habits.
- c. Taking time to self-evaluate.
 - i. See **chart i** for example journal “**Daily Journal.**”
- d. Daily *prānāyāma* (breathwork) practice to start the day.

See **chart 1** for *prānāyāma* **handout** for students.
- e. Daily exercise/*āsana* (posture) practice woven into the day.

See **chart 2** for *āsana* **handout** for students.
- f. Daily Meditation practice for better rest at the end of the day.

See **chart 3** for **meditation handout** for students.

 - ii. See **chart ii** for example journal “**Daily Journal: Yoga Practices.**”

A. Keeping a sleeping schedule:

Sleep is one of the three pillars of health and vitality according to Ayurveda (Dash, 2017).

निद्रायत्तं सुखं दुःखं पुष्टिः काश्यं बलाबलम् ।
वृषता क्लीबता ज्ञानमज्ञानं जीवितं न च ॥३६॥

- चरक संहिता, सूत्रस्थान २१

Happiness, misery, nourishment, emaciation, strength,
weakness, virility, sterility, knowledge, ignorance, life
and death – all these occur depending on the proper or
improper sleep.

- Charak Samhita, Sutrasthana 21/36

Good sleep helps students maintain their health and wellness physically, mentally, and emotionally (Deng, et al., 2021). This in turn will also support the success of their college learning effectiveness. Tracking sleep will create an opportunity to observe correlations between the amount of sleep, wellbeing, and academic aptitude. Sleeping disorders are common amongst college students and negatively impact academic performance (Deng, et al., 2021; Salmani, et al., 2020).

B. Practicing regular eating habits and hydration habits:

Nutrition is another pillar of health and vitality according to Ayurveda. The *Charaka Samhita* (circa 400-200 BCE) dedicates five chapters to dietetics, believing a wholesome diet is foundational to good health and disease prevention. Additionally, good nutrition provides students sustenance for growth and development physically, mentally, and emotionally. Studies show that nutrition is an essential component to college learning effectiveness (Almair, 2019; Brace, et al., 2018). Tracking personal eating habits will allow students to observe correlations between nutrition, hydration, and wellbeing and aptitude. The activity may also open conversation for the impacts of food insecurity and help the professor identify anyone who may need sustenance assistance (Chaparro et al., 2009; FAO, 2021).

C. Taking time to self-evaluate:

Pātañjali's Yoga Sūtra's teach self-evaluation is key self-discovery and refinement. Researcher Yan's et al., meta-analysis supports the sage's yogic theory.

Overall, self-assessment interventions had positive and meaningful effects on students' academic performance. This supports theoretical claims about the benefits of self-assessment in improving student learning. Self-assessment interventions with explicit feedback on students' performance showed a significantly larger effect than those without explicit feedback, indicating that the availability of external feedback provides important scaffolding for successful self-assessment.

A finding Karaman's meta-analysis also supports (2021). Through daily self-reflection students will observe correlations between being introspectively aware and responsive

to their wellbeing and their academic satisfaction with effectiveness as a student (Misra).

The following spread sheets are the journal worksheets for the 8-week program. Students can fill them out by hand or in digital format. The first “Daily Journal” tracks daily routines and the second “Daily Journal: Yogic Practices” tracks use of Yoga techniques. Below is the “Daily Journal” worksheet. Following are details on the program’s Yoga techniques followed by the “Daily Journal: Yoga Practices” worksheet.

Chart i

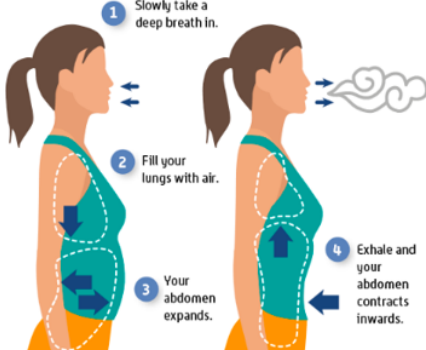
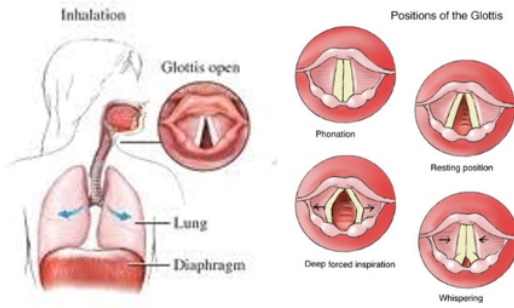


Daily Journal				Stress/Tension gauge 1-10		Notes/Gratitude
Date:	Food and time	Fluid/oz/ time				
Awake:			6-10 am			
Sleep Σ			10am-2pm			
weather			2-6 pm			
			6-10 pm			
			10pm-2am			
Asleep:			2-6 am			
Date:	Food and time	Fluid/oz/ time			Notes/Gratitude	
Awake:			6-10 am			
Sleep Σ			10am-2pm			
weather			2-6 pm			
			6-10 pm			
			10pm-2am			
Asleep:			2-6 am			
Date:	Food and time	Fluid/oz/ time			Notes/Gratitude	
Awake:			6-10 am			
Sleep Σ			10am-2pm			
weather			2-6 pm			
			6-10 pm			
			10pm-2am			
Asleep:			2-6 am			
Date:	Food and time	Fluid/oz/ time			Notes/Gratitude	
Awake:			6-10 am			
Sleep Σ			10am-2pm			
weather			2-6 pm			
			6-10 pm			
			10pm-2am			
Asleep:			2-6 am			
Date:	Food and time	Fluid/oz/ time			Notes/Gratitude	
Awake:			6-10 am			
Sleep Σ			10am-2pm			
weather			2-6 pm			
			6-10 pm			
			10pm-2am			
Asleep:			2-6 am			
Date:	Food and time	Fluid/oz/ time			Notes/Gratitude	
Awake:			6-10 am			
Sleep Σ			10am-2pm			
weather			2-6 pm			
			6-10 pm			
			10pm-2am			
Asleep:			2-6 am			
Day Off						

D. Breathing (*Prāṇāyāma*) Practice:

Patañjali's Yoga Sutra 2.52 refers to *prāṇāyāma* as method to remove obstacles that may be preventing clear perception. Subsequent sutra 2.53 claims clear perception is necessary concentration. *Prāṇāyāma* is currently the subject of western medical studies working to discern the physiology behind the practice. Researchers' findings show that specific breathing techniques induces a more parasympathetic state of consciousness (Paul, et al., 2007; Kuppusamy, et al., 2017; Perciavalle et al., 2017; Sinha, et al., 2013). A study showing correlation between controlled breathing exercises and the reduction of stress while testing is promising (Paul, et al., 2007). In addition, another study finds *Bhramari* increases brain function (Kuppusamy, et al., 2017). While neither study is conclusive, the program uses four types of breathwork shown through studies to be effective in triggering parasympathetic. Additionally, students' objective observations on the effectiveness of the breath for increasing equanimity is subject to personal interpretation in their daily journal.

Below is the pranayama worksheet available to the students. Detailed information regarding the breathwork will take place during class lectures as noted in the syllabus.

Chart 1

Breathwork/ Pranayama	
	3-Part Breath/Durga pranayama
	<p>Intro. Week 1 Used during postures.</p> <p>Relax jaw, neck, & shoulders. Extended inhales & complete exhales are controlled by the diaphragm and movement of the ribcage.</p> <p><i>Calming, centering, strengthening, cleansing.</i></p>
	Victorious Breath/Ujjāyī pranayama*
	<p>Intro. Week 2 - Used for sun salutations.</p> <p><i>Ujjāyī pranayama (Sound/whisper) is completed like 3-part breath. The main difference is the back of the throat is closed slightly to make a rushing sound when inhaling and exhaling. This breath is stabilizing to the torso.</i></p> <p><i>Calming, centering, cleansing, physically and mentally stabilizing, strengthening.</i></p>
	Alternate Nostril breath/Nadi Shodhana pranayama
	<p>Intro. Week 2</p> <p>Plug off right nostril, inhale left side. Plug off left nostril, exhale right side. Inhale, right side, plug off, exhale left side. If comfortable to do so, keep eyes closed and "look" up towards the back of the forehead. Otherwise, look down. Cont. for 3 + min.</p> <p><i>Calming, centering, rejuvenating, good for fatigue and memory retention.</i></p>
	Black Bee Breath/Bhramari pranayama*
	<p>Intro. Week 2</p> <p><i>Bhramari pranayama can be done by just plugging off the ears or by plugging ears with thumbs, eyes with fingers, and using fingers to restrict exhale from nose. Inhale deep and exhale humming from throat to vibrate nasal cavity, brain, and face.</i></p> <p><i>Calming, lowers blood pressure, enhances cognitive control, reduces stress levels.</i></p>

E. Exercise/Asana Practice:

Although extensive use of *āsana* is a recent development in Yoga, the intent behind the use of asana remains the same. *Āsana* is a physical posture taken to alter one's physiology for an improved state of equilibrium. "Perfection in *āsana* means *sithra* (firmness) in body, *sithra* (steadiness) in intelligence, and benevolence in consciousness (Yoga Sutra 2.46). The effectiveness of *āsana* for cultivating equanimity is a current subject of western medical studies. Researchers are finding engaging in Yoga postures reduces anxiety and increases students parasympathetic state (Kathapillai, M., 2019; Sathya, et al., 2020; Tripathi, et al., 2018). The postures chosen for this 8-week program address student ergonomics (i.e. sitting, typing, reading for long periods) and to help increase their comfort while engaged in activities common for a student. Through daily self-reflection students can observe any correlation between practicing the poses and their wellbeing.

All students will receive a flow chart of the postures (*āsanas*) practiced in class (see Chart 2). Additionally, a second document will provide instruction, precautions, and benefits for each posture to encourage intelligent practice outside of class (please see the appendix, Charts A1-A4). Each week the class will focus on a new type of posture and its benefits. For example, week two focuses on postures for releasing anxious energy for improved concentration and week three focuses on strengthening the torso to help with sitting comfortably for extended periods of time. Supporting independent practice through literature and lecture allows for the material to have practical application beyond the class and everyday living. For a further breakdown of weekly

āsana focus, please see the syllabus, Chart 5. For a breakdown of all postures medical and yogic benefits, please see the appendix, Charts A1-A4.

Chart 2

































Posture (asana) Practice for Class			
			
Check in: Sit tall, breath deep, tune in. 1 + min.	1. Newspaper Flow for neck and shoulders. (1m)	2. <u>Exhale</u> , spine up. <u>Inhale</u> , spine down. (1 min.)	3. <u>Exhale</u> , into child's or down dog. (1 min.)
*One breath one pose, during sun-salutation, to warm the body for practice. See			
	4. <u>Inhale</u> , stand.* <u>Exhale</u> , to find balance and ease.	5. <u>Inhale</u> , arms up over head.	6. <u>Exhale</u> , forward fold comfortably.
			
	7. <u>Inhale</u> , right leg back. <u>Exhale</u> , find balance.	8. <u>Inhale</u> , low or high lunge.	9. <u>Exhale</u> , low lunge with hands on the ground.
			
	11. <u>Exhale</u> onto stomach.	12. <u>Inhale</u> , cobra or up-dog.	13. <u>Exhale</u> , child's pose or down dog.
			
	15. <u>Exhale</u> , forward fold.	16. <u>Inhale</u> , upward reaching mountain.	17. <u>Exhale</u> , mountain with hands in prayer pose.
<p>* One minute (1m) is just a suggested duration of time to hold the poses. Feel to customize the practice at your discretion in support of your health and wellness. A nice gauge for our posture practice is the quality of our 3-part breath and our ability to find comfort in the asanas. For more details on the postures please refer to the postures purpose and detailed instruction handout.</p>			
			
18. <u>Inhale</u> , left foot back. <u>Exhale</u> , triangle. (1 min*)	19. <u>Inhale</u> , torso lifts. <u>Exhale</u> , Warrior 2. (1m)	20. <u>Exhale</u> , hands to thigh & into lunge legs. (1m)	21. <u>Inhale</u> , high lunge pose. (1m) Exhale, to end.
			Repeat steps 18-24 after stepping right foot back.
22. <u>Inhale</u> , up to warrior III. (1m) Exhale, to end.	23. <u>Inhale</u> , tree pose. (1m)	24. <u>Exhale</u> , to stand. (1m)	

Chart 2 continued

Posture (asana) Practice for Class Continued			
			
25. <u>Inhale</u> , upward reaching mountain. (1m)	26. <u>Exhale</u> , forward fold. (1m)	27. <u>Inhale</u> , plank pose. (1m) <u>Exhale</u> , to floor.	28. <u>Inhale</u> , into locust. (1m) <u>Exhale</u> , to floor.
			
29. <u>Exhale</u> , child's pose. (1m) <u>Inhale</u> , onto knees.	30. <u>Exhale</u> , camel pose. (1m) <u>Inhale</u> , out of pose.	31. <u>Inhale</u> , seated twist to right (1m) & left (1m).	32. <u>Inhale</u> , boat pose. (1m)
Featured Breathwork			
Sit comfortably. Practice for up to three min.	33. <u>Inhale</u> , legs-up-the wall pose. For up to three min. Bring legs down once tingling or discomfort occurs.		34. <u>Exhale</u> , savasana. Rest comfortably. (5 min.+)

F. Meditation Practice:

In the Yoga tradition, meditation offers personal insight and initiating change for the betterment of an individual.

When the five senses, along with the mind, remain still and the intellect is not active, that is known as the highest state. They consider yoga to be firm restraint of the senses. Then one becomes undistracted for yoga is the arising and the passing away” (Johnston, *Mukhya Upanishad*, 6.10-11).

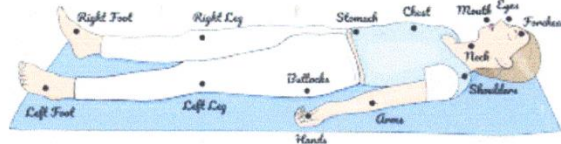
Discerning the effectiveness of meditation from a short-term and long-term perspective is a popular topic of research. One meta-analysis by Frontiers Psychology shows meditation, Yoga, and mindfulness help alleviate depression, anxiety, and stress in college students (Breedvelt, 2020). In keeping with these findings, the Mindfulness-Based Stress Reduction technique of progressive relaxation is a part of the program due consistent findings in its ability to reduce stress and depression amongst college students (Hazlett-Stevens, et al., 2017; An, et al., 2022; Smit, et al., 2021). Daily journaling offers an opportunity to reflecting on correlations between engaging in a simple progressive relaxation meditation and wellbeing.

Please see the chart below on Mindfulness-Based Stress Reduction (Chart 3). The handout is available to students for independent meditation practice.

Chart 3

Mindfulness- Based Stress Reduction

Mindfulness-Based Stress Reduction is a collection of meditation techniques one of which is also known as body scan meditation. The guided meditation technique done after a series of postures have been completed. Starting with the toes and moving awareness up and into the body the participants are encouraged to progressively relax the body. This is accomplished by tensing and releasing individual muscles and muscle groups starting in the feet and moving up to the head (Sarkar). Medical research has shown the technique effectively relaxes the body and exhibits moderate effects in reducing depression among adolescents and young adults.



1. To begin find a comfortable position to rest. This can be by lying down or being seated. You are welcome to close your eyes or leave them heavy lidded. Choose what makes you feel as comfortable as possible.
2. To begin we will take a minute to simply breathe and check in with our breath. Is it fast or slow? Hot or cool? How do the ribs move and is the neck, jaw, and face relaxed?

The chart below is a simple example of body scan meditation. Red indicates the right side of the body and blue indicates the left side. Inhale into a various body part, contract the muscle while withholding the breath, and then exhale to release the muscle.

1. Inhale into Contract Release	Right foot Right foot Right foot	2. Inhale into Contract Release	Right calf Right calf Right calf	3. Inhale into Contract Release	Right knee Right knee Right knee	4. Inhale into Contract Release	Right thigh Right thigh Right thigh	5. Inhale into Contract Release	Right leg Right leg Right leg
6. Inhale into Contract Release	Right glute Right glute Right glute	7. Inhale into Contract Release	Right pelvis Right pelvis Right pelvis	8. Inhale into Contract Release	Right waist Right waist Right waist	9. Inhale into Contract Release	Right ribs Right ribs Right ribs	10. Inhale into Contract Release	R. shoulder R. shoulder R. shoulder
11. Inhale into Contract Release	Right hand Right hand Right hand	12. Inhale into Contract Release	Right arm Right arm Right arm	13. Inhale into Contract Release	Right neck Right neck Right neck	14. Inhale into Contract Release	Right face Right face Right face	15. Inhale into Contract Release	R. forehead R. forehead R. forehead
16. Inhale into Contract Release	Left foot Left foot Left foot	17. Inhale into Contract Release	Left calf Left calf Left calf	18. Inhale into Contract Release	Left knee Left knee Left knee	19. Inhale into Contract Release	Left thigh Left thigh Left thigh	20. Inhale into Contract Release	Left leg Left leg Left leg
21. Inhale into Contract Release	Left glute Left glute Left glute	22. Inhale into Contract Release	Left pelvis Left pelvis Left pelvis	23. Inhale into Contract Release	Left waist Left waist Left waist	24. Inhale into Contract Release	Left ribs Left ribs Left ribs	25. Inhale into Contract Release	L. shoulder L. shoulder L. shoulder
26. Inhale into Contract Release	Left hand Left hand Left hand	27. Inhale into Contract Release	Left arm Left arm Left arm	28. Inhale into Contract Release	Left neck Left neck Left neck	29. Inhale into Contract Release	Left face Left face Left face	30. Inhale into Contract Release	L. forehead L. forehead L. forehead

To End: Breathe into the whole right side, hold breath and tense muscles, exhale relax the whole right side of the body. Next breathe into the whole left side, hold breath and tense muscles, exhale relax the whole left side of the body. Breathe into the whole body together, hold breath and tense muscles, exhale and relax the whole body together. Prep for savasana.

i. Sarkar, Dilip. Yoga Therapy, Ayurveda, and Western Medicine. Nataraj Books Publishing, 2017.

Chart ii

Daily Journal: Yogic Practices									
<i>Date:</i>	Yoga				boat		Meditation Mindfulness Based Stress Red		
seated pose		lunge		warrior II	bridge		MBSR		
newspaper					legs-up-the				
flow		plank		warrior III	wall		Breathwork/Mantra*		
cat-cow		cobra		tree	seated twist		Diaphragmatic Breath		
down dog		down dog		locust	triangle		Ujjayi Pranayama*		
sun					mtn.				
salutation		forward fold		camel	pose/arms		Alternate Nostril Breath		
mula bandha					chin mudra		Bhramari Breath*		
<i>Date:</i>	Yoga				boat		Meditation		
seated pose		lunge		warrior II	bridge		MBSR		
newspaper					legs-up-the				
flow		plank		warrior III	wall		Breathwork/Mantra*		
cat-cow		cobra		tree	seated twist		Diaphragmatic Breath		
down dog		down dog		locust	triangle		Ujjayi Pranayama*		
sun					mtn.				
salutation		forward fold		camel	pose/arms		Alternate Nostril Breath		
mula bandha					chin mudra		Bhramari Breath*		
<i>Date:</i>	Yoga				boat		Meditation		
seated pose		lunge		warrior II	bridge		MBSR		
newspaper					legs-up-the				
flow		plank		warrior III	wall		Breathwork/Mantra*		
cat-cow		cobra		tree	seated twist		Diaphragmatic Breath		
down dog		down dog		locust	triangle		Ujjayi Pranayama*		
sun					mtn.				
salutation		forward fold		camel	pose/arms		Alternate Nostril Breath		
mula bandha					chin mudra		Bhramari Breath*		
<i>Date:</i>	Yoga				boat		Meditation		
seated pose		lunge		warrior II	bridge		MBSR		
newspaper					legs-up-the				
flow		plank		warrior III	wall		Breathwork/Mantra*		
cat-cow		cobra		tree	seated twist		Diaphragmatic Breath		
down dog		down dog		locust	triangle		Ujjayi Pranayama*		
sun					mtn.				
salutation		forward fold		camel	pose/arms		Alternate Nostril Breath		
mula bandha					chin mudra		Bhramari Breath*		

Applied Yogic Philosophy:

Finally, students will explore universally applicable Yogic philosophies specifically that support health and wellness. The philosophies address triggers for anxiety and depression (i.e. lack of sleep, unbalanced blood sugar levels, poor hydration, poor posture, poor breathing technique) and ways to counter-balance the triggers. The 8-week program will touch on three main philosophical constructs from *Ayurveda*, the *gunas*, and *Patañjali's Ashtanga Yoga*. Each weekly theme explores one of the philosophies.

Ayurveda is the ancient Indian practice of maintaining health and wellness through self-care. Maintaining regular sleep cycles, proper diet, and hydration are three key *Ayurvedic* practices. *Ayurveda* also considers environmental influences on health such the weather, work culture, and social groups (Riccobono, et al., 2020). By becoming more aware of personal self-care habits (i.e. sleep and nutrition) and taking note of our environment, we can adjust everyday activities in support of our health (Lad, 2009).

Although the practice of *Ayurveda* is very comprehensive, the program only focuses on sleep, nutrition, hydration, and weather because, in the words of Yoga Therapist Dilip Sarkar M.D., “it is best to adopt these daily practices into one’s life slowly, so they are manageable, which encourages sustainability.”

Chart *i* is an example of the *Ayurvedic* journal worksheet (pg. 14).

The second philosophical focus, *gunas*, comes from the sixth school of Hindu philosophy, *āstika*. *Āstika* is the belief that all things arise from three energetic forms, *rajasic* (energetic, excitable, heat), *tamasic* (calm, grounded, cool) and *sattvic* (stable, balanced

equilibrium). Of these three forms *sattvic* is the most desirable, although all are necessary to navigate the fluctuating emotions of life. Considering the three energetic states and exploring the engagement of various energetic states through the postures that evoke a rajasic, tamasic, or sattvic state will prompt discussion regarding advantages of the energetic states from a physiological perspective. For example, standing and core postures raise the blood pressure (evoking more of a rajasic state) and gentle inversions lower the blood pressure (evoking more of a tamasic) (Giancarlo, et al., 2011).

The final philosophical focus comes from *The Yoga Sutras*. Compiled between 500 and 400 B.C.E. by Indian sage *Patañjali*, the 196 *sutras* (memorable expressions of a general truth or principles) include a section where the practice of Yoga is divided into eight limbs (*Ashtanga Yoga*). They are as follows.

1. *Yamas* – social restraints
 1. (ahimsa) non-violence, (satya) truthfulness, (asteya) non-stealing, (brahmacharya) right use of energy/celebrity, (aparigraha) non-greed
2. *Niyamas* – self-disciplines
 1. (saucha) cleanliness, (santosha) contentment, (tapas) austerity/discipline, (svadhyaya) study of self, (isvara pranidhana) surrender to higher self/God
3. *Āsana* - physical postures
4. *Prāṇāyāma* - control of breath
5. *Pratyahara* - withdrawal of the senses
6. *Dhāraṇa* - concentration
7. *Dhyāna* - meditation
8. *Samādhi* – absorption

Each week will introduce a new precept for a class theme. *Āsanas* (postures), *prāṇāyāma* (breathwork), and *Dhyāna* (meditation) are pillars of the program. Discussion regarding *yamas*, *niyamas*, *pratyahara*, *dhāraṇa*, and *samādhi* will pertain to health, wellness, and aptitude (Eisenberg, 2009). Please see class syllabus chart # for a timeline regarding the introduction of the philosophies.

Class Format (See Chart 4 pg. 28)

A consistent class format will allow for introduction of new material and review of the previous week's material content reinforcement. Learning how to adapt the Yogic techniques to meet individual needs will allow students the opportunity to customize content. For example, with diaphragmatic breathing students will learn the importance self-regulating the length of their inhales and exhales. This will provide freedom for students to explore their breath and strengthen their breathing capabilities together regardless of possible unique individual challenges. In addition, the students will learn the benefits of the Yogic techniques through the lens of traditional Yogic philosophy and clinical investigation. For example, according to Yogic tradition, diaphragmatic breathing creates more energy (*prana*) in the body and builds strength. Through clinical investigation, we understand diaphragmatic breathing can build lung capacity, trigger the parasympathetic response, make us more tolerant to carbon dioxide, and lower the harmful effects of the stress hormone cortisol (Perciavalle, et al., 2017).

Class Format Specifics

- A. Participants will receive instruction in an eight-week course that meets at the same time and location (preferably a danceroom, classroom, or conference room with room for movement) twice a week for an hour class.
- B. A certified Yoga instructor will lead the class.
- C. Classes will be available both in person and virtually.
- D. Traditional lecturing in addition to in class discussion and experiential learning will help facilitate the learning process.
- E. The week's first class will discuss a Yogic philosophy and conclude with the asana, pranayama, and meditation practice. The second class of the week will start with a class discussion on the philosophical theme for the week and conclude with the asana, pranayama, and meditation practice.
- F. Course material will be available to all participants. Additionally, all participants will receive a journal on the first day of class for their use in tracking and recording their daily reflections on their practice. Students can use an excel spreadsheet if preferable. All students must bring their handwritten journals or computer journals to class every class.
- G. The class does not require equipment or props; however, students will be encouraged to come with a writing utensil, their laptops for notetaking, and a mat or towel for practice.
- H. To help evaluate the program's effectiveness, all participants will take the College Learning Effectiveness Inventory (CLEI), the Perceived Stress Scale (PSS), and the Beck

Depression Inventory-II (BDI-II) before taking the class. After the course, the students will again take the College Learning Effectiveness Inventory to see if there is a shift in any of the six categories. Comparing evaluation results to the journal entries can help discern any correlation between the tested results and the student's observances.

- I. On the first day of class, the students will receive instructions on using the journal. Each week new philosophy will be introduced, with the final week (week 8) being review.
- J. The introduction of new pranayama (breathwork) will be on weeks one, two, three, and four.
- K. Each week new asanas and information regarding the posture's benefits will be available to participants. Please see chart 4 for an outline of the class format and chart 5 for the syllabus spreadsheet with further detail.

Chart 4

Class Format		
10-15 min.	Opening of Class	Date/Notes
	Checking in w/students.	
	Points of order.	
	Find comfortable seated position.	
	Breath check-in.	
	Mudra	
	Weekly Yoga Philosophy	
30-35 min.	Asanas (Postures)	
	Breathwork	
	Mantra*	
9-10 min.	Meditation	
5-6 min.	Savasana	

Eight-Week Syllabus (See Chart 5)

The eight-week syllabus's design regularly introduces content and promotes the practice of intelligent independent use of postures, breathwork, and meditation. Each week focus on specific philosophies, postures, and breathwork (see Chart 5). Classroom goals include teaching students how the Yoga techniques can shift an individual's physiology in unique ways, and intelligent use of the practices. New weekly philosophies touch on practical aspects of daily living such as hydration, nutrition, sleep, self-care, concentration, posture, etc. for easy assimilation of the practice into ones' lifestyle. Practicing the postures will occur by completing the *āsana* flow every meeting. Additionally, each week will explore different postures from the flow in detail.

Practicing the specialized breathwork will occur on more than one occasion and focusing on one mediation will cultivate proficiency with the practice. The following spreadsheet outlines syllabus week by week and the progressive steps for encouraging independent practice. To promote content retention, students can work together. Classroom interaction supports the development of emotional intelligence, which is considered key to student success; however, working with classmates is optional, providing grace for those who prefer to work independently (Eisenberg, 2009). All weeks will have a weekly worksheet detailing the focus for breathwork, philosophy, and posture. Also, compilation worksheets for the postures, breathwork, and meditation are available for easy reference of the weekly content.

Below is **chart 5**, the **8-week syllabus spreadsheet**, and **chart 6** is a **weekly worksheet** example.

Chart 5

			First day of class.	Second day of class.
Week One	Checking in w/students.	Class roster, Check for DPSS, ESCI-U, CLEI.	Questions & discussion on philosophy.	
	Points of order.	Class & content intro.	Check in on journals.	
	Seated comfortably.	Introduce optimal sitting posture.	Find optimal seated posture together.	
	Breath check-in	No guidance from instructor.	No guidance from instructor.	
	Mudra	Into. Chin mudra.	n/a	
	Weekly Yoga Philosophy	Yama & Niyama, (Social Restraints & Self-Discipline)		n/a
	Breathwork	Intro. to 3-Part breath.	Use 3-Part Breath together.	
	Asanas	Intro. to flow and handouts.	Move through asanas together.	
	Mantra	n/a	n/a	
Week Two	Checking in w/students.	Class roster.	Questions & discussion on philosophy.	
	Points of order.	Class & content intro.	Check in on journals.	
	Seated comfortably.	Let students find optimal seated posture.	Students teach optimal seated posture.	
	Breath check-in	No guidance from instructor.	No guidance from instructor.	
	Mudra	Use Chin mudra during lect.	n/a	
	Weekly Yoga Philosophy	Tri-gunas (Three Energies)	n/a	
	Asanas	Practice asanas w/ gunas in mind.	Label postures using gunas.	
	Breathwork	Introduce <i>ujjāyī</i> pranayama.	Use <i>ujjāyī</i> pranayama during sun-sal.	
	Mantra	<i>ujjāyī</i> pranayama	<i>ujjāyī</i> pranayama	
Week Three	Checking in w/students.	Class roster	Questions & discussion on philosophy.	
	Points of order.	Class & content intro.	Check in on journals.	
	Seated comfortably.	Let students find optimal seated posture.	Students check each other for o.s.p..	
	Breath check-in	No guidance from instructor.	No guidance from instructor.	
	Mudra	Use Chin mudra during lect.	n/a	
	Weekly Yoga Philosophy	Asana & Pranyama (Posture, Breathwork)	n/a	
	Asanas	Discuss benefits of core postures.	Identify which postures strengthen core.	
	Breathwork	Alternate nostril breathing.	Alternate nostril breathing.	
	Mantra	<i>ujjāyī</i> pranayama during sun-salutation	<i>ujjāyī</i> pranayama during sun-salutation	
Week Four	Checking in w/students.	Class roster	Questions & discussion on philosophy.	
	Points of order.	Class & content intro.	Check in on journals.	
	Seated comfortably.	Let students find optimal seated posture.	Students check each other for o.s.p..	
	Breath check-in	No guidance from instructor.	No guidance from instructor.	
	Mudra	Use Chin mudra during lect.	n/a	
	Weekly Yoga Philosophy	Ayurveda- Circadian rhythms, seasonally rhythms, food, and relevance to the journal.		
	Asanas	Discuss balance & standing asana bene.	Help each other in balance postures.	
	Breathwork	Black bee breath.	Black bee breath.	
	Mantra	black bee & <i>ujjāyī</i> pranyama during sun-s.	black bee & <i>ujjāyī</i> pranyama during sun-s.	
	Meditation	Basic body-scan	Basic body-scan	
	Savasana	4 min. <i>savasana</i>	4 min. <i>savasana</i>	

Chart 5 continued

		First day of class.	Second day of class.
Week Five	Checking in w/students.	Class roster	Questions & discussion on philosophy.
	Points of order.	Class & content intro.	Check in on journals.
Students practice sun-salutations independent of teacher instruction w/ a partner.	Seated comfortably.	Let students find optimal seated posture.	Students check each other for o.s.p..
	Breath check-in	No guidance from instructor.	No guidance from instructor.
	Mudra	Use Chin mudra during lect.	n/a
	Weekly Yoga Philosophy	<i>Pratyahara (Withdrawal of Senses)</i>	n/a
	Asanas	Diss. restorative & twisting asanas bene.	Review restorative & twisting asanas bene.
	Breathwork	Alternate nostril breathing.	Alternate nostril breathing.
	Mantra	<i>ujjāyī pranyama during sun-salutation</i>	<i>ujjāyī pranyama during sun-salutation</i>
	Meditation	Basic body-scan	Basic body-scan
	Savasana	5 min. <i>savasana</i>	5 min. <i>savasana</i>
Week Six	Checking in w/students.	Class roster	Questions & discussion on philosophy.
	Points of order.	Class & content intro.	Check in on journals.
Students practice sun-salutations independent of teacher instruction.	Seated comfortably.	Students find optimal seated posture.	Students check each other for o.s.p..
	Breath check-in	No guidance from instructor.	No guidance from instructor.
	Mudra	Use Chin mudra during lect.	n/a
	Weekly Yoga Philosophy	<i>Dharana (Concentration)</i>	n/a
	Asanas	Diss. backbends & inversions benefits.	Rev. back bends & inversions benefits.
	Breathwork	Black bee breath.	Black bee breath.
	Mantra	<i>black bee & ujjāyī pranyama during sun-s.</i>	<i>black bee & ujjāyī pranyama during sun-s.</i>
	Meditation	Basic body-scan	Basic body-scan
	Savasana	6 min. <i>savasana</i>	6 min. <i>savasana</i>
Week Seven	Checking in w/students.	Class roster	Questions & discussion on philosophy.
	Points of order.	Class & content intro.	Check in on journals.
Students practice sun-salutations independent of teacher instruction.	Seated comfortably.	Students find optimal seated posture.	Students check each other for o.s.p..
	Breath check-in	No guidance from instructor.	No guidance from instructor.
	Mudra	Use Chin mudra during lect.	n/a
	Weekly Yoga Philosophy	<i>Dhyana & Samadhi, (Meditation & Absorption)</i>	n/a
	Asanas	Dis. Bene. chest openers & forward folds.	Rev. Bene. chest openers & forward folds.
	Breathwork	Students choose breath for 3 minutes.	Students choose breath for 3 minutes.
	Mantra	<i>ujjāyī pranyama during sun-salutation</i>	<i>ujjāyī pranyama during sun-salutation</i>
	Meditation	Basic body-scan	Basic body-scan
	Savasana	6 min. <i>savasana</i>	6 min. <i>savasana</i>
Week Eighth	Checking in w/students.	Class roster	Remind about DPSS, ESCI-U, & CLEI.
	Points of order.	Check in on journals.	Final journal check.
Independent, paired, or small group practice to allow students the opp. to exercise their Yoga knowledge.	Seated comfortably.	Students find optimal seated posture.	Students check each other for o.s.p..
	Breath check-in	No guidance from instructor.	No guidance from instructor.
	Mudra	Use Chin mudra during lect.	n/a
	Weekly Yoga Philosophy	<i>Final Review.</i>	<i>Final review and questions.</i>
	Asanas	Let students practice independently.	Let students practice independently.
	Breathwork	Students choose breath for 3 minutes.	Students choose breath for 3 minutes.
	Mantra	<i>ujjāyī pranyama during sun-salutation</i>	<i>ujjāyī pranyama during sun-salutation</i>
	Meditation	Basic body-scan	Basic body-scan
	Savasana	6 min. <i>savasana</i>	6 min. <i>savasana</i>

Chart 6 – Example Handout

Week 2 Handout

Weeks Focus: The *Guṇas*: *Sattva*, *Rajas*, *Tamas*

Classroom discussion: Reflect on the three *guṇas* and how the various qualities stand out in your life. Also, how might it be possible to induce more *sattvic* energy into your daily living? Keep in mind we can shift our energetic state through *asana*, *prāṇāyāma*, and meditation.

Tri-Guṇas: *Sattva*, *Rajas*, *Tamas*

(गुणः): ***guṇa(s)*** (A quality good or bad.)

(सत्त्व): ***sattva or sattvic*** (A quality of balance, goodness, purity, light, ethereal.)

(रजस): ***rajas or rajasic*** (Action, passion, change, creation, impurity, hot, spicy.)

(तमस): ***tamas or tamasic*** (Mental darkness, ignorance, illusion, slow inertia, grounding.)

Around the same time *Patañjali* is thought to have compiled *The Yoga Sutras* the sixth school of Hindu philosophy (*Samkhya*) was beginning to solidify (400-500 B.C.E). An Indian sage by the name of *Kapila* is often credited for the development of *Samkhya* and, like *Patañjali*, found inspiration from the ancient Hindu texts (*Vedas*).

One of the key *Samkhya* theories is all matter (*prakṛiti*) manifests from three diverse types of energetic qualities (*guṇas*). Think of each quality as a characteristic or attribute to describe the energy of a particular person, environment, or food/substance. The three qualities are *sattva* (balance, goodness, purity, light ethereal energy), *rajas* (action, change, creation, hot, passion, spicy), and *tamas* (grounding, ignorance, illusion, mental darkness, slow inertia). The interplay of these qualities determines living beings' characteristics and is instrumental in shaping their quality of life.

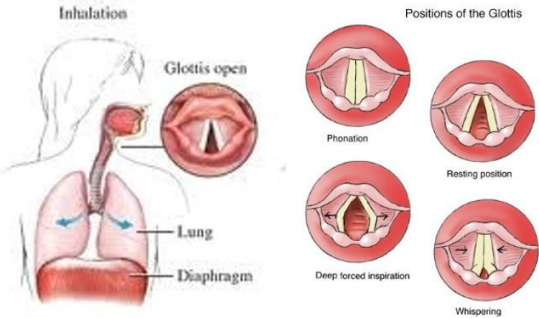
Traditionally speaking, when we do *āsana* (postures) we reduce *rajas* (action, change, creation, hot, passion, spicy), *prāṇāyāma* (breathing exercises) reduce *tamas* (grounding, ignorance, illusion, mental darkness, slow inertia) and meditation increases *sattva* (balance, goodness, purity, light ethereal energy). Additionally, our *guṇas* are sensitive our surrounding environment, state of mind, and foods. For example, a hot summer day will be the essence of *rajas*, while a cool damp fall day, can be the essence of *tamas*. Busy schedules exhibit *rajasic* nature and may result in feeling burned out and irritable. We can counterbalance the *rajasic* energy by engaging in something to evoke a *tamasic* energy. However, just as too much *rajasic* energy can take away from our health and wellness, too much *tamasic* energy can do the same by evoking lethargy and an unwillingness to put forth effort. The goal is to find a balance of the two so we can enjoy good emotional, mentally, and physical health.

The philosophy of the *gunas* can also apply to our food. Spicy, salty, bitter, and astringent food is considered more *rajastic* in nature, whereas sweet, savory, and umami are considered more *tamasic* in nature. The *rajasic* food excites and energizes and the *tamasic* food stabilize and




















ground. Foods that have a more alkaline effect on the body are thought to be more sattvic. Examples of sattvic food would be leafy greens, berries, and vegetables.

Can you think of any more examples of *rajas*, *tamas*, and *sattva*?

Breathwork/prāṇāyāma:

	<p>Victorious Breath/Ujjāyī prāṇāyāma*</p> <p>Intro. Week 2 - Used for sun salutations.</p> <p><i>Ujjāyī prāṇāyāma</i> (Sound/whisper) is completed like 3-part breath. The main difference is the back of the throat is closed slightly to make a rushing sound when inhaling and exhaling. This breath is stabilizing to the torso.</p> <p><i>Calming, centering, cleansing, physically and mentally stabilizing, strengthening.</i></p>
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Posture focus (asana) while keeping the *gunas* in mind:

*Postures are thought to reduce the rajasic energy in the body however, some postures are more grounding than others. Can you identify the most tamasic postures?				 
		 		
		 	 	
	 			
How could you modify a posture to make it a little more rajasic, tamasic, or sattvic? How could a posture be used in your daily routine for cultivating sattvic energy?				

Meditation: Please see the meditation handout.

Contraindications and Modifications

The class will be accessible to all students regardless of physical abilities. Lead by a certified and experienced Yoga educator, all postures, breathwork, as well as the meditation are customizable under professional guidance. This allows placing emphasis on the desired physiological shift rather than a specific execution of postures, breathwork, or meditation. Improving ones' emotional, mental, and physical wellness, will be subject to an individual's capabilities. Being that the structure of the program is educationally based on the practical application of Yoga, for the purpose of self-care, participants can seek help from the Yoga educator (privately or in person depending on their comfort level) for help with modifications. A listing of the contraindications for the asana portion is available under "Asana Instruction, Precautions, and Academic Advantages" worksheets (Chart A-1 – A-4 in the appendix). The breathwork chosen is also modifiable and does not require any specific length of inhale, retention, or exhale. Built in variability allows participants to independently determine the volume and rate of breathwork best suited to their personal needs. Finally, the meditation does not require the participant to lay down, sit, or orient in any specific way to be effective. Also, opening or closing eyes does not impact the effectiveness of the meditation. Participants can determine the level of engagement most appropriate for them and their nervous system.

General Summary

Derived from the ancient mind-body practice and congruent with western scientific studies the *8-Week Program to Support Undergraduate Academic Aptitude* draws from Yoga tradition to help empower undergraduates with techniques for dealing with anxiety,

depression, and stress. The techniques chosen for the three modalities have been clinically shown to create physiological shifts for offsetting anxiety and depression in undergraduates (Breedvelt, Elam, Kauts) The postures, breathwork, and meditation chosen for the program are based on student ergonomics (i.e. sitting, typing, reading for long periods), mental challenges (processing and assimilating lots of information), and emotional challenges, (being newly independent, away from family, processing new experiences). Also, the non-religiously based Yogic philosophies were chosen to help bring awareness to common triggers for anxiety and depression (i.e. lack of sleep, unbalanced blood sugar levels, poor hydration, poor posture, poor breathing technique) and ways to counter-balance habits and patterns for improved health and wellness. Through experiential learning, collaborative learning, and practicing nonjudgmental self-awareness, the program offers mindfulness based Yogic practices for self-intervention and self-regulation. This in turn will supports emotional, mental, physical, and social development which all are key to successful academic performance (Gokcen). Improved academic performance may also help foster student retention.

Appendix

Chart A-1














Asana Instruction, Images, Precautions, & Advantages				
1. Seated Pose	Chin level to the ground.		Academic Help	
Come to sit.	Shoulders Relaxed.		Strengthens back.	
Prop hips for comfort.	Hands to thighs.		Efficient breathing.	
Sit tall, spine long.	Gaze soft and forward.		Lowers stress.	
Keep shoulders over hips.	Legs do not have to cross.		Improves thought clarity.	
2. Cat-Cow	Exhale, to arch spine up.		Precautions: Cushion knees if needed. Avoid if exp. back problems, neck injury or diarrhea.	
Come to hands and knees.	Inhale, to bring spine down.			
Gently grip floor w/ fingers	Breath from diaphragm.			
Press feet to floor to stabilize.	Flexing to stretch & strengthen spine.			
3. Child's Pose/	Down-dog (optional)	 	Child's pose: Diarrhea, pregnancy, knee injury D. dog: High blood pressure, pregnancy, carpal tunnel	
Come to hands and knees.	From child's pose curl toes.			
Lower hips towards heels.	Arms straight, press palms.			
Lower heads towards floor.	Keep arms straight & lift hips by straightening legs.			
Opt. to use props 4 comfort.				
4. Mountain	Hands to prayer or	 	Precautions: Headache, insomnia, low blood press.	
Come to stand.	Reach arms overhead.			
Align ankles, hips, shoulders.	Gaze soft and forward.			
Extend through top of crown.	Breath from diaphragm.			
Keep chin level to floor.				
5. Forward fold	Fold to comfort level.	 	Precautions: Low back and neck injuries. High blood pressure	
Come to stand.	Breath from diaphragm.			
Align ankles, hips, shoulders	Inhale, up to standing.			
Inhale, reaching arms up.				
Exhale, fold forward.				
6. Low lunge/	Inhale, arms to sky.	 	Precautions: Knee injury, neck problems.	
Come to stand.	High lunge			
Inhale, step right leg back.	Lift right leg from floor.			
Exhale, right knee to floor.	Lift right heel high			
Inhale lift knee over lift heel.	Gaze soft and forward.			
7. Plank	Extend back through heels.		Precautions: Carpal tunnel syndrome.	
Come to hands and knees.	Engage front of thighs.			
Curl back toes under.	Hug belly button to spine.			
Gently grip floor with fingers	Breath from diaphragm.			
Inhale, to straighten legs.	Gaze soft and downward.			
8. Cobra/	Press feet, legs, palms to ground & lift chest.	 	Precautions: Back injury, carpal tunnel syndrome, headache, pregnancy.	
Come to lay on the stomach.				
Slide hands under shoulders	Up-dog (optional)			
Keep elbows by the side.	Straighten arms, lift torso & tops of thighs off floor.			
Gaze soft and downward.				

Chart A-2 continued














Asana Instruction, Images, Precautions, & Advantages				
9. Child's Pose/		Down-dog (optional)		Academic Help
Come to hands and knees.	From child's pose curl toes.	 		<i>Strengthens back for sitting.</i>
Lower hips towards heels.	Arms straight, press palms.			<i>Stretches back.</i>
Lower heads towards floor.	Keep arms straight & lift hips by straightening legs.	Child's pose: Diarrhea, pregnancy, knee injury		<i>Stretches shoulders open.</i>
Opt. to use props 4 comfort.		D. dog: High blood pressure, pregnancy, carpal tunnel		<i>Calming to the mind.</i>
10. Low lunge/				
Come to stand.	High lunge	 		<i>Tones legs for circulation.</i>
Inhale, step right leg back.	Lift right leg from floor.			<i>Pelvis alignment 4 sitting.</i>
Exhale, right knee to floor.	Lift right heel high			<i>Alleviates compression in front of hip from sitting.</i>
Inhale lift knee over left heel.	Gaze soft and forward.	Precautions: Knee injury, neck problems.		
11. Forward fold				
Come to stand.	Breath from diaphragm.	 		<i>Calms brain.</i>
Align ankles, hips, shoulders.	Inhale, up to standing.			<i>Reduce fatigue & anxiety.</i>
Inhale, reaching arms up.		Precautions: Low back and neck injuries. High blood pressure		<i>Elevates mood.</i>
Exhale, fold forward.				<i>Improves digestion.</i>
12. Mountain				
Hands to prayer or		 		
Come to stand.	Reach arms overhead.			<i>For grounding & strength.</i>
Align ankles, hips, shoulders.	Gaze soft and forward.			<i>Improves posture.</i>
Extend through top of crown.	Breath from diaphragm.			<i>Relieves sciatica.</i>
Keep chin level to floor.		Precautions: Headache, insomnia, low blood pressure		<i>Helps with follow through.</i>
13. Triangle				
Exhale torso over right leg.				<i>Helps with anxiety.</i>
Come to stand.	Inhale, stretch the arms wide, keeping stacked.			<i>Helps with low back pain.</i>
Inhale, step left leg back.		Precautions: Headache, diarrhea, low blood pressure, heart and neck challenges.		<i>Improves digestion.</i>
Exhale, straighten legs.	Breath from diaphragm.			<i>Opens chest, hips, & groin.</i>
Inhale, arms should level.	Inhale out of posture.			
14 Warrior two				
Inhale, arms should level.				<i>Increases stamina.</i>
Come to stand.	Gaze soft and forward.			<i>Helps with back ache.</i>
Inhale, step left leg back.	Breath from diaphragm.			<i>Improves digestion.</i>
Exhale, bend right knee over the right heel.		Precautions: High blood pressure, diarrhea, neck challenges.		<i>Opens chest, hips, & groin.</i>
15. Low lunge/				
Inhale, arms to sky.		 		<i>Tones legs for circulation.</i>
Come to stand.	High lunge			<i>Pelvis alignment 4 sitting.</i>
Inhale, step right leg back.	Lift right leg from floor.			<i>Alleviates compression in front of hip from sitting.</i>
Exhale, right knee to floor.	Lift right heel high	Precautions: High blood pressure, diarrhea, neck challenges.		
Inhale left knee over heel.	Gaze soft and forward.			
16. Warrior three				
Straighten front leg & lift the back leg from ground.				<i>Strengthens back.</i>
Come to lunge pose.	Gaze soft and down.			<i>Strengthens shoulders.</i>
Tip torso & arms forward.	Breath from diaphragm.			<i>Strengthens core.</i>
Lean torso & arms forward.		Precautions: High blood pressure, equilibrium challenges.		<i>Improves posture.</i>

Chart A-3 continued











Asana Instruction, Images, Precautions, & Advantages			
17. Tree			Academic Help
Come to stand.	Place sole of foot on standing leg. AVOID knee to protect the knee joint.		<i>Helps with posture.</i>
Lift a foot from the ground.			<i>Improves focus.</i>
Swing thigh open to side.	Gaze soft and forward.		
	Arms above head (opt.)	Precautions: Avoid turning supportive foot out. Avoid placing lifted foot on knee.	
18. Triangle	Exhale torso over left leg.		
Come to stand.	Inhale, stretch the arms wide, keeping stacked.		<i>Helps with anxiety.</i>
Inhale, step right leg back.			<i>Helps with low back pain.</i>
Exhale, straighten legs.	Breath from diaphragm.	Precautions: Headache, diarrhea, low blood pressure, heart and neck challenges.	<i>Improves digestion.</i>
Inhale, arms should level.	Inhale out of posture.		<i>Opens chest, hips, & groin.</i>
19. Warrior two	Inhale, arms should level.		
Come to stand.	Gaze soft and forward.		<i>Increases stamina.</i>
Inhale, step left leg back.	Breath from diaphragm.		<i>Helps with back ache.</i>
Exhale, bend right knee over the right heel.		Precautions: High blood pressure, diarrhea, neck challenges.	<i>Improves digestion.</i>
			<i>Opens chest, hips, & groin.</i>
20. Low lunge/	Inhale, arms to sky.		
Come to stand.	High lunge		<i>Tones legs for circulation.</i>
Inhale, step right leg back.	Lift right leg from floor.		<i>Pelvis alignment 4 sitting.</i>
Exhale, right knee to floor.	Lift right heel high		<i>Alleviates compression in front of hip from sitting.</i>
Inhale lift knee over left heel.	Gaze soft and forward.		
			Precautions: Knee injury, neck problems.
21. Warrior three	Straighten front leg & lift the back leg from ground.		
Come to lunge pose.			<i>Strengthens back.</i>
Tip torso & arms forward.	Gaze soft and down.		<i>Strengthens shoulders.</i>
Lean torso & arms forward.	Breath from diaphragm.	Precautions: High blood pressure, equilibrium challenges.	<i>Strengthens core.</i>
			<i>Improves posture.</i>
22. Tree			
Come to stand.	Place sole of foot on standing leg. AVOID knee to protect the knee joint.		<i>Helps with posture.</i>
Lift a foot from the ground.			<i>Improves focus.</i>
Swing thigh open to side.	Gaze soft and forward.		
	Lift arms above head (opt.)	Precautions: Avoid turning supportive foot out. Avoid placing lifted foot on knee.	
23. Mountain	Hands to prayer or		
Come to stand.	Reach arms overhead.		<i>For grounding & strength.</i>
Align ankles, hips, shoulders.	Gaze soft and forward.		<i>Improves posture.</i>
Extend through top of crown.	Breath from diaphragm.	Precautions: Headache, insomnia, low blood pressure	<i>Relieves sciatica.</i>
Keep chin level to floor.			<i>Helps with follow through.</i>
24. Forward fold	Fold to comfort level.		
Come to stand.	Breath from diaphragm.		<i>Calms brain.</i>
Align ankles, hips, shoulders.	Inhale, up to standing.		<i>Reduce fatigue & anxiety.</i>
Inhale, reaching arms up.			<i>Elevates mood.</i>
Exhale, fold forward.			<i>Improves digestion.</i>
			Precautions: Low back and neck injuries. High blood pressure

Chart A-4










Asana Instruction, Images, Precautions, & Advantages			
25. Plank	Extend back through heels.		Academic Help
Come to hands and knees.	Engage front of thighs.		Improves posture.
Curl back toes under.	Hug belly button to spine.		Elevates mood.
Gently grip floor with fingers	Breath from diaphragm.		Improves digestion.
Inhale, to straighten legs.	Gaze soft and downward.	Precautions: Carpal tunnel syndrome.	
26. Locust	Gaze soft and downward.		Strengthens back.
Come to lay on the stomach.	Exhale out of the posture.		Help with fatigue.
Place arms alongside torso.	Breath from diaphragm.		Improves digestion.
Inhale, lift sternum, arms, & legs from ground.			Strengthens back.
27. Camel	Place hands at waist or		Opens chest & shoulders.
Come to kneeling position.	backs of thighs or		Reduce fatigue.
Press tops of feet or curl toes to floor.	on the heels of the feet.		Counteracts sitting.
Lift sternum towards sky.	Keep 90° angle chin to neck.		Stretches front strengthens back.
28. Seated-twist	Inhale, twist torso towards raised thigh.		
Sit in a cross legged position			Improves digestion.
Place the sole of the foot, of the calf on the floor, on the ground.	Place back arm against back		Relaxes the body.
Inhale 2 get in & out of twist			Calms the mind.
28. Seated-twist	Inhale, twist torso towards raised thigh.		Stretches back and neck.
Sit in a cross legged position			Improves digestion.
Place the sole of the foot, of the calf on the floor, on the ground.	Place back arm against back		Relaxes the body.
Inhale 2 get in & out of twist			Calms the mind.
29. Boat	Bend the knees & lift the shins parallel to the floor.		Stretches back and neck.
Come to a seated position.	Reach arms towards legs.		Increases energy.
Place hands behind hips.	Staiten legs comfortably.		Relieves stress.
Lift sternum towards sky.	Breath from diaphragm.		Improves digestion.
30. Bridge	Inhale, lift hips & torso up.		Core, hips, spine strength.
Come to lay on the back.	Keep knees steady.		Calms the mind.
Slide heels under knees.	Breath from diaphragm.		Alleviate stress.
Place arms alongside torso.	Exhale, torso & hips down.		Reduces fatigue.
Press into arms and feet.		Precautions: Neck injury, eyes, ears, nose throat, challenges.	
31. Legs-up-the wall	Slide feet up wall to comfortable height.		Strengthens back.
Come to lay on the back close to a wall.	Arms alongside torso or		Alleviates anxiety.
Place feet on the wall.	Reach arms overhead.		Improves breathing.
	Breath from diaphragm.		Improves digestion.
32. Savasana	Place pillow under head if need to level the head.		Alleviates headaches.
Come to lay on the back	Relax arms, legs, and torso.		Calms the mind.
If tension in the lower back place bolster under knees.	Breath from diaphragm.		Relaxes the body.
Level chin with forehead.			For fatigue & headache.
		Precautions: Back injury, discomfort, pregnancy.	
		Lower blood pressure.	

Chart B-1
Benefits of postures used in class from a medically validated perspective and traditional yogic perspective.

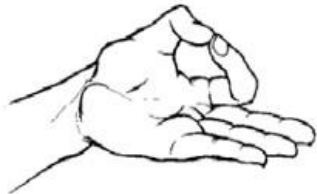

Find chin mudra (i)		Benefits: Mudra for meditation and gaining knowledge. Opens lowers lungs, tranquilizer for the brain, calming and quieting. Palms up = energizing; palms down = grounding (i)	
Weekly Yoga Philosophy			
Asanas (Postures) (30-35 min.)		Medical Benefits (sources listed below)	Yoga Benefits (source below 3)
Newspaper flow		Less tension, more circulation shoulders, neck, upper back. (1)	Builds confidence & trust.
Cat/cow		Stretch back, core, hips; Strengthen spine neck; Massages core (1)	Confidence, trust; Back bend, calming.
Down dog/Child's pose		Strengthens legs, back, shoulders, arms; Stretches back body (1)	Calming, peaceful, relaxing, grounded.
bandha for core stability		If appropriate, engaging mula bandha for greater core stability (ii). It helps w/ low back stability during sun-salutations.	Helps maintain energy levels.
	Mtn. pose	Spinal alignment, stability; Facilitating breathing (1)	Confidence, trust; Back bend, calming.
	Mtn. pose arms raised	Spinal alignment, stability, facilitating breathing; Stretches arms, side waist, front body (1)	Balanced, grounded, strong, confident.
	Forward fold	Stretches neck, shoulders, hamstrings (1)	Calming, peaceful, relaxing, grounded.
	Low/high lunge	Stretches hips, legs, groin, foot arms; Strengthens knee; focus (2)	Stable, confidence, determination, trust.
	Plank	Strengthens back, core, arms, legs; Improves mood, lowers stress (1)	Strong, stable, confidence, determination.
	dog	Strengthen arms, chest, shoulders, back; Increase lung capacity (1)	Heart opener, confidence, trust.
	Down dog/child's	Shoulders and back opener, lower back opener (1)	Calming, peaceful, relaxing, grounded.
	Low lunge	Stretches hips, legs, groin; Strengthens knee; focus (2)	Stable, confidence, determination, trust.
	Forward fold	Stretches neck, shoulders, hamstrings (1)	Calming, peaceful, relaxing, grounded.
	Mtn. pose arms raised	Spinal alignment, stability, facilitating breathing; Stretches arms, side waist, front body (1)	Balanced, grounded, strong, confident.
Right side	Mtn. pose	Spinal alignment, stability, facilitating breathing (1)	Confidence, trust; Back bend, calming.
	Triangle	Stretches ankles, legs, hips, torso, spine, shoulders, arms (1)	Balanced, grounded, confident, creativity.
	Warrior II	Stretches hips, groin, shoulders, chest; good for lungs, focus (2)	Strong, confidence, determination, trust.
	Lunge	Stretches hips, legs, groin, foot arms; Strengthens knee; focus (2)	Stable, confidence, determination, trust.
	Warrior III	Strengthens legs, back, shoulders, arms; Stretches hips, chest (2)	Stable, confidence, determination, balance.
	Tree	Focus, concentration, balance, stability (1)	Strong, stable, confidence, focus, trust.

Chart B-2

Benefits of postures used in class from a medically validated perspective and traditional yogic perspective.

Flow of Class and Yoga Tools Benefits			
Asanas		Medical Benefits (sources listed below)	Yoga Benefits (source below 3)
Left side	Triangle	Stretches ankles, legs, hips, torso, spine, shoulders, arms (1)	Balanced, grounded, confident, creativity.
	Warrior II	Stretches hips, groin, shoulders, chest; Good for lungs, focus (2)	Strong, confidence, determination, trust.
	Lunge	Stretches hips, legs, groin, foot arms; Strengthens knee; focus (2)	Strong, confidence, determination, trust.
	Warrior III	Strengthens legs, back, shoulders, arms; Stretches hips, chest (2)	Stable, confidence, determination, trust
	Tree	Focus, concentration, balance, stability (1)	Confidence, determination, balance, trust.
Mtn. pose arms raised		Spinal alignment, stability, facilitating breathing; Stretches arms, side waist, front body (1)	Balanced, grounded, strong, trust.
Forward Fold		Stretches neck, shoulders, hamstrings (1)	Calming, peaceful, relaxing, grounded.
Plank		Strengthens back, core, arms, legs; Improves mood, lowers stress (1)	Strong, stable, confidence, determination.
Locust		Strengthens back of knee, glutes, hamstrings; Stretch lower back (1)	Heart opener, confidence, trust.
Camel		Strengthens thighs; Stretch hips, shoulders, back, torso, low back (2)	Heart opener, confidence, trust.
Right side	Seated twist	Stretches and strengthens abs, promotes circulation (1)	Release of stress and tension.
Left side	Seated twist	Stretches and strengthens abs, promotes circulation (1)	Release of stress and tension.
Boat		Improves balance and core strength (1)	Strong, stable, confidence, determination.
Bridge		Strengthen/stretch back, shoulders, hips, thighs (1)	Heart opener, confidence, trust.
Legs-up-the wall		Stimulates circulation in head, neck/increases parasympathetic (1)	Release of stress and tension.
Flow of Class and Yoga Tools Benefits			
Breathwork, Mantra* & Meditation (9-10 min.) (See Breathwork Handout for further inst.)		Medical Benefits (sources listed below)	Yoga Benefits (source below 3)
Diaphragmatic Breath, 3-Part Breath		Improves lumbar stabilization (7) increases lung capacity, decreases stress (8)	Stimulation of sympathetic system, clarity, attentiveness (6)
Ujjāyī prāṇāyāma (Sound/whisper)*, Victorious Breath		Enhance autonomic, cerebral, and psychological flexibility (4) Reduced heart rate and increased skin conductance (5) vagal stimulation (i)	Builds lung capacity, soothing to nervous system, helps open the throat for easier breathing (i)
Nadi Shodhana, Alternate nostril breath		Increases basal metabolic rate, lowers blood pressure (i)	Balances right & left hem. of brain and nervous system. Connects body to the mind. (i)
Bhramari Breath*, Black Bee Breath		Reduces heart rate and blood pressure, enhanced cognitive control, reduced stress levels. (9)	Massages pituitary gland with vibration, calms body and mind, helps with hypertension, stress, anxiety, and migraines (i)
Meditation: Mindfulness-Based Stress Reduction (See Meditation Handout for further inst.)		Stimulates parasympathetic, helps reduce inflammation, decreases stress. (10)	Improves mind body connection, lowers stress levels, fosters peace of mind (i)
Savasana (5-6 min.)		Relaxes body and mind. Good for deep relaxation and hypertension. (1)	Deep muscle relaxation, grounding of nervous system, restorative. (3)

Chart C

Chin Mudra & Mula Bandha			
i. Chin Mudra	Medical Benefits	Yoga Benefits	
Directions:	Stimulation of the brain. (11)	Helps calm the mind. (i)	
Touch pointer finger to thumb with light pressure.		Increases focus. (i)	
Rest the hands on thighs if sitting and on the ground if laying down.		Help with receptivity and processing information. (i)	
Palms can be turned up or facing down.			
ii. Mula bandha	Medical Benefits	Yoga Benefits	
Directions:	Triggers lumbopelvic muscles. (13)	Helps conserve energy. (12)	
Sit with spine erect.	Stabilizes pelvis and low back. (13)	Increases energetic flow to the heart. (12)	
On exhale, slightly lift the pelvic floor muscles.			
Inhale and release.	Reduces risk of injury during sun salutations. (13)		
Once comfortable to do so, keep the muscles engaged while continuing to breath.			

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