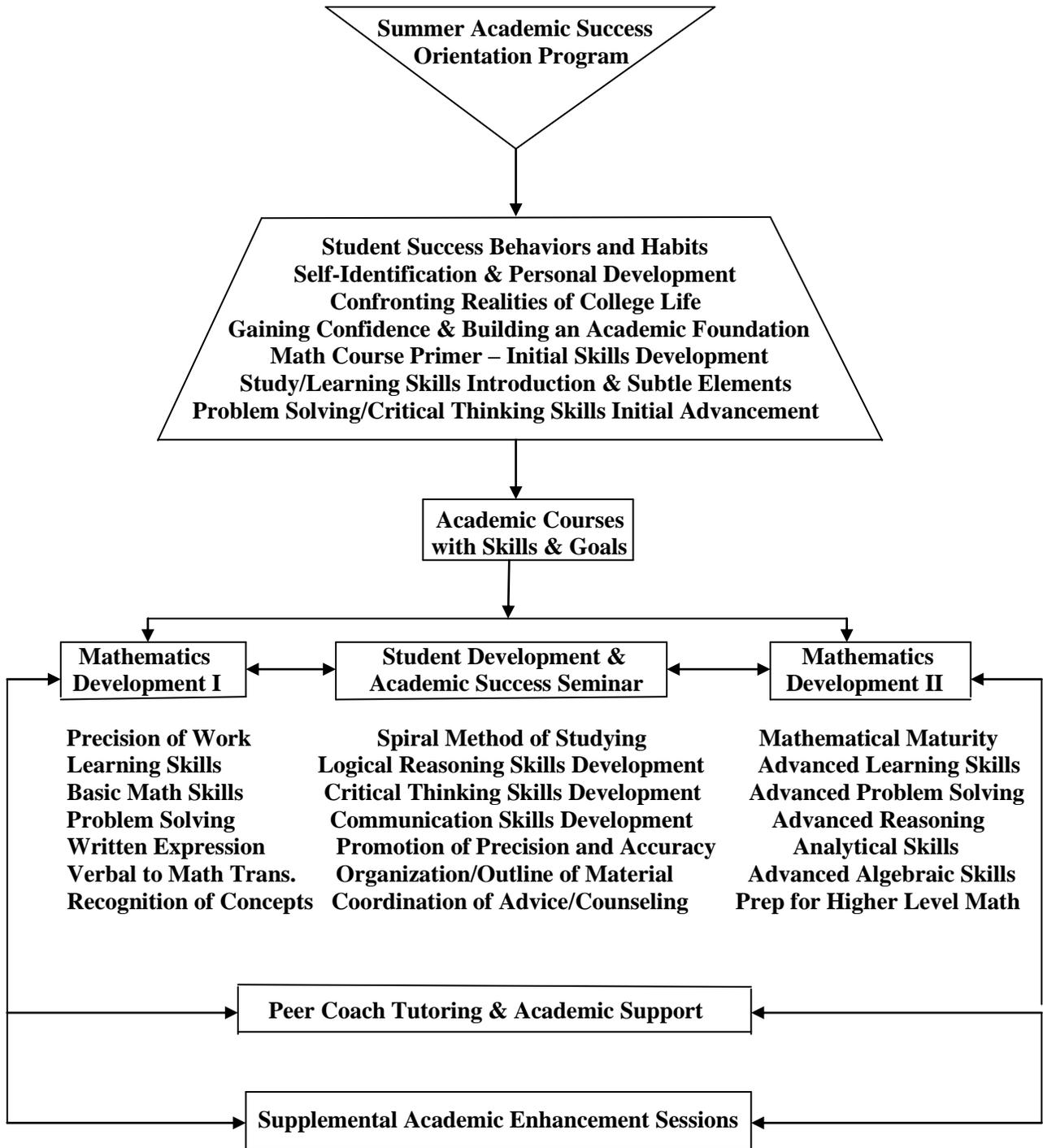


A Comprehensive Model for Student Retention and Academic Success Among Working Adult Students in Regional Academic Centers

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FACILITATING THE DEVELOPMENT OF ESSENTIAL MATHEMATICS STUDY SKILLS/HABITS & LEARNING ABILITIES THROUGH EXTENDED AND/OR PAIRED FACULTY EFFORTS AND ACADEMIC SUPPORT

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The list below is provided in consideration of the fact that college students must adjust to the notion of incorporating *study skills/habits* and acquire *learning abilities* that require a *combination* of commitment, diligence and a sense of urgency that many, if not most, of them are not accustomed to in their lives otherwise. While reading this list think of how the *incorporation of these skills and habits* could become *more readily facilitated* if the math instructor were also the instructor of a *Student Success* course, or if the math instructor and the instructor of the *Student Success* course engaged in *sustained and extensive collaboration*. It is claimed that in order for students to become successful in their study of mathematics they must *consistently and persistently engage* in the itemized efforts below. It is further claimed that the *specialized assistance* that must be provided to students in order for them to *learn to effectively engage in them* will be more *readily facilitated* by the use of either the instructor-instructor model or the collaborative model that are being promoted.

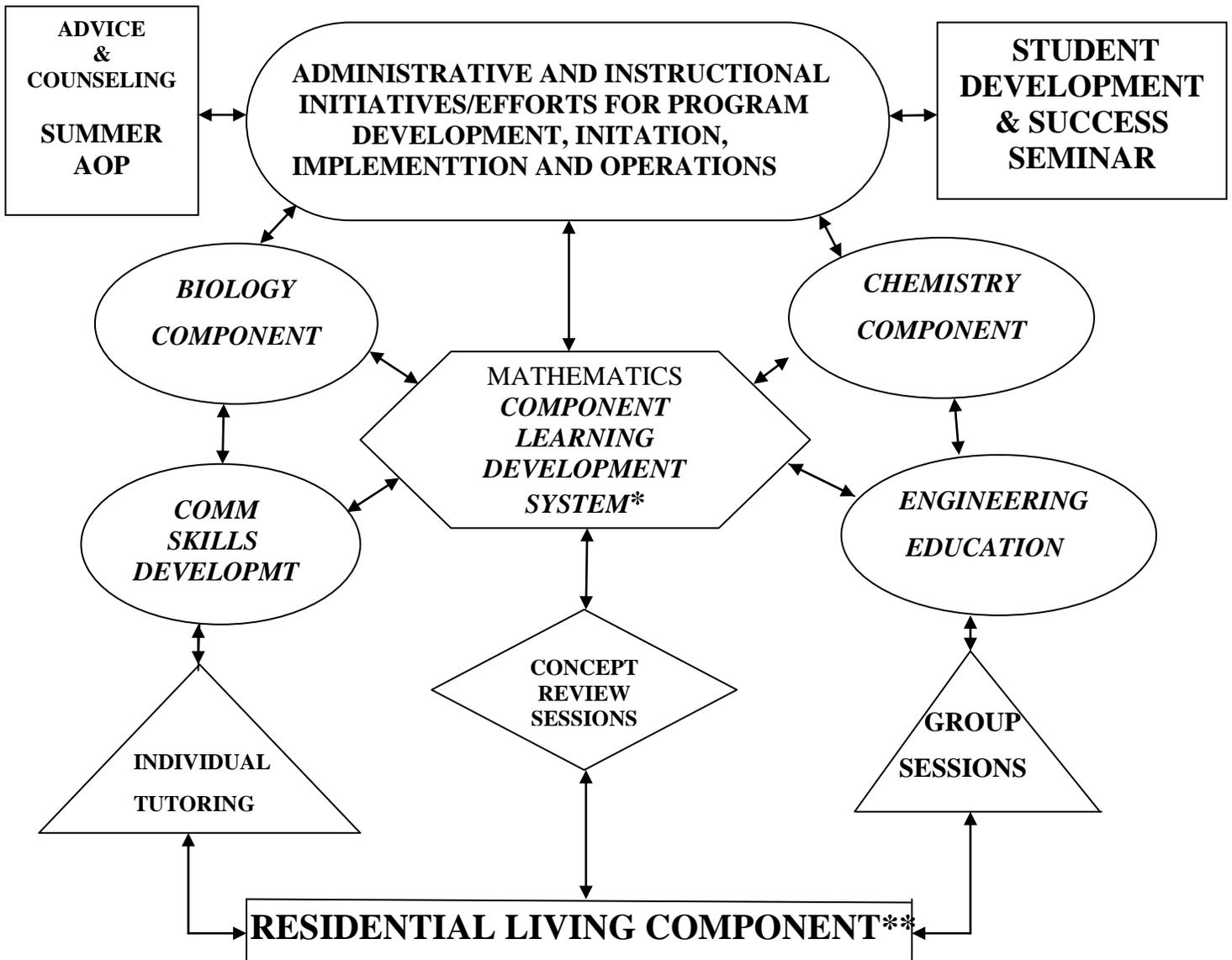
- Work on *assigned homework* exercises *daily*: Students often neglect the section by section homework of the textbook chapters in favor of only doing review exercises, chapter test exercises, or other assigned exercises/work that are(is) to be *handed in*. Therefore they need inducements to encourage a daily effort to work assigned exercises and consequently learn from doing them.
- *Diligently* study *discussions, presentations* and *examples* in the textbook: Because most, if not the *great majority*, of students at entry experience some level of difficulty in doing this, they need *specialized assistance* with it. Therefore, the importance of the *simultaneous teaching* of a math course and a *Student Success* course by one person, or the *sustained collaboration* between the two instructors, is illuminated.
- *Review* the course material *regularly* and *diligently*: A sense of urgency must prevail, and a provision for instilling it needs to be incorporated into any effort to promote the *development* of the requisite *learning skills* among *all students*.
- Conduct a *Determined Preview* of the material that will be covered at the next class meeting: More than just “looking over” the new material, this means making a determined effort to *understand as much of it as is feasible* through

one's own effort(s) prior to it being presented or otherwise explored in the next class session. Accordingly students' level of communication skills and abilities plays a major role here. Again *specialized assistance* is needed, and the corresponding effort relative to this concern by the instructor(s) becomes crucial to not only realizing real progress with respect to the development of students' ability to *engage in effective determined preview*, but to students making *real and sustained academic progress* as college students overall.

- *Plan* for, and follow through on, *study time* during the week and on *weekends*: Students often simply assume that they will eventually “get around to” studying as needed during weekdays and on weekends. Consequently, time just “slips by” without the required amount of study being devoted to their courses. Therefore, they must learn to effectively *plan for the effective incorporation of study time* throughout the week (including weekends), and be willing to (or learn to) *diligently stick to* their plan.
- *Organize* all work and develop an *outline* of all material. Students should then use the outline when studying. This will give them *a better view* of the overall *organization* of the course material and assist them with that all-important *review* of the course material while moving forward. Thus they *will* be able to *see the forest as well as the trees*, instead of seeing one at the expense of the other, something that's especially *crucial for effective in- depth learning*. Once again, the amount of time needed to properly assist students with this is not available in a traditional math class, thus another example of the efficacy of the promoted models.
- *Manage/Mesh* school lives and personal lives, and *coordinate* the school life–social/family life – work life *continuum* in a way that leads to *academic success*. Furthermore, within the school life, for many students there is a need to *successfully coordinate* the *academic life – extra curricula life mix* as well. Mastering this phenomenon requires a *sustained effort over time*, and certainly involves *attention to, concerns and issues* that must be addressed *well beyond the math classroom*, though perhaps partially addressed in it as well. Once again, this illustrates both the need for and the efficacy of effectively *joining the efforts* that are traditionally carried out in *math classes* with those usually found in *Student Success classes* and/or in *other academic support units* of the campus.

COMPREHENSIVE STEM PROGRAM STRUCTURE FOR TRADITIONAL COLLEGE STUDENTS

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* As indicated on the chart the Mathematics Component Learning Development System is placed at the center of the entire effort. As such it is where the Essential Learning Skills, such as Attention to Detail, Preciseness, Critical Thinking, Logical Reasoning/ Problem Solving, Abstract Thinking, and other important skills are primarily developed. However the other components would incorporate a concern for the development of these skills as well.

**All student participants would live in the same dormitory or housing complex. That would facilitate the ability to conduct academic programming and/or maintain direct face-to-face contact with students at any time during the day or night. As a matter of fact many, if not most or all, of the faculty/staff of the program could be housed in the residential area. For programs that are situated at large multifaceted and/or complex campuses this feature could be especially helpful. For smaller campuses it would probably be better to locate the program in a central place on the campus, but preferably with access by students and faculty/staff during extended hours of the day.